

## **Response to Comments**

**Hanford Air Operating Permit, Revision B**  
**March 22 – April 24, 2015, with extension**  
**to May 8, 2015**

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*Summary of a public comment period and responses to comments*

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# **Response to Comments**

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**Hanford Air Operating Permit, Revision B  
March 22 – April 24, 2015, with an  
extension to May 8, 2015**

Department of Ecology  
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## INTRODUCTION

The Washington State Department of Ecology's Nuclear Waste Program (NWP) regulates air pollution sources at the Hanford Site through permits. These permits ensure Hanford's air emissions stay within regulatory limits to protect people and the environment. The Hanford Air Operating Permit puts all of the various emission requirements into a single composite permit.

The purpose of this Response to Comments is to:

- Describe and document public involvement actions.
- List and respond to all significant comments received during the public comment period and any related public hearings.

### **This Response to Comments is prepared for:**

Comment period: Hanford Air Operating Permit, Revision B, March 22 – April 24, 2015, with an extension to May 8, 2015.

Permit: *Hanford Air Operating Permit, Revision B*

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our website: [www.ecy.wa.gov/programs/nwp](http://www.ecy.wa.gov/programs/nwp).

## REASONS FOR ISSUING THE PERMIT

The AOP's purpose is to ensure Hanford's air emissions stay within safe limits that protect people and the environment. Three agencies contribute the underlying permits to the AOP.

- The Washington State Department of Ecology (Ecology) is the overall permitting authority and regulates toxic air emissions.
- The Washington State Department of Health (Health) regulates radioactive air emissions.
- The Benton Clean Air Agency (BCAA) regulates outdoor burning and the Federal Clean Air Act asbestos national Emission Standards for Hazardous Air Pollutants (NESHAP) regulations.

This permit is a revision of the AOP and incorporates changes made during 2013 and 2014.

## PUBLIC INVOLVEMENT ACTIONS

NWP encouraged public comment on the Hanford Air Operating Permit during a 30 day public comment period held March 22 through April 24, 2016. During this comment period, a request was submitted to Ecology to extend the comment period. Ecology extended the comment period two weeks. The extended comment period ended on May 8, 2015.

A public notice announcing the comment period was mailed to 1436 interested members of the public. Copies of the public notice were distributed to members of the public at Hanford Advisory Board meetings.

The original comment period was also identified using the Department of Ecology's March 10, 2015, Permit Register. The extension to the comment period was identified using the Permit Register on April 24, 2015.

A public announcement legal classified advertisement was placed in the Tri-City Herald on March 22, 2015, for the original comment period. A public announcement legal classified advertisement was placed in the Tri-City Herald on April 24, 2015, notifying the public of the extension of the original public comment period to May 8, 2015. A notice announcing the start of the comment period was sent to the [Hanford-Info email list](#), which has 3330 recipients. The comment period was also posted as an event on Ecology's [Hanford Education & Outreach Facebook page](#).

The Hanford information repositories located in Richland, Spokane, and Seattle, Washington, and Portland, Oregon, received the following documents for public review:

- Public notice
- Transmittal letter
- Statement of Basis for the proposed Hanford Air Operating Permit, Revision B
- Draft Hanford Air operating Permit, Revision B
- Supporting documents

The following public notices for this comment period are in Appendix A of this document:

1. Public notice (focus sheet)
2. Classified advertisement in the *Tri-City Herald*
3. Notice sent to the Hanford-Info email list
4. Event posted on Ecology Hanford Education & Outreach Facebook page



## THE ENVIRONMENTAL PROTECTION AGENCY ORDER TO ECOLOGY

The Environmental Protection Agency (EPA) issued an Order on May 29, 2015, granting in part and denying in part two petitions for objection to permits 00-05-006, Renewal 2, and 00-05-006, Renewal 2, Revision A (the Hanford Air Operating Permit Renewal 2 and Revision A). The Order is attached as Exhibit F.

The EPA granted Claim 3B "... the Petitioner's request to object to the Hanford Title V Permit on the basis that Ecology's record is inadequate with respect to addressing Subpart H in the Hanford Title V Permit." The EPA also proposed a number of options that could be used to address this inadequacy. Additionally, the EPA clarified the scope of judicial review in a discussion under Claim 4.

Ecology and Health discussed the findings of the Order and selected to implement one of the suggestions in the Order. Ecology will "attach an addendum to the Hanford Title V Permit to correct any omissions or errors – if any – contained in the license with respect to Subpart H, since Ecology also has authority to enforce the NESHAP."

This addendum to the Hanford Title V Permit will be located in the Attachment 2 Section of the permit. The addendum will contain requirements that the Permittee will have to abide by in addition to the requirements in Attachment 2. Health will use the addendum in Attachment 2 to correct the underlying radiological air emission license(s) (RAEL) in the next revision of the Hanford RAEL (FF-01).

In the following "Response to Comments" section, responses that indicate information will be added or placed in the addendum to Attachment 2 indicates that Ecology will, in accordance with the advice from EPA, place any corrections to the license with respect to Subpart H in the addendum.

In the EPA Order, fifteen specific responses to the Hanford AOP Renewal 2 and the Hanford AOP Renewal 2, Revision A were identified. These specific comments were not part of the comments received during the public comment period for the Hanford AOP Renewal 2, Revision B. They have been added as responses 110-124 to respond to the objection raised by the EPA. The responses provided here are not the original responses (the responses the EPA objected to), but are new responses prepared under consideration of the EPA Order.

The previous response to comments are included as Exhibit G and Exhibit H

## LIST OF COMMENTERS

### Commenter Identification:

The table below lists the names of organizations or individuals who submitted a comment on the Hanford Air Operating Permit modification and where you can find Ecology's response to the comment(s).

Commenter	Organization	Comment Number	Page Number
Johns, William	Citizen	1	[Insert page range(s).]
Green, Bill	Citizen	2	
Conlan, Mike	Citizen	3	
Kaldor, Reed	Contractor to permittee	4	
Green, Bill	Citizen	5 - 38	
Poirier, Jeanne	Citizen	39	
Vanni, Jean	Citizen	40	
Integrated comments from USDOE	USDOE-RL and USDOE-ORP	41 - 71	
Sanders, Beth	Citizen	72	
Thorton, Dale	Citizen	73	
Carpenter, Tom	Hanford Challenge	74 - 109	
Various	Response to EPA Objection	110-124	

## RESPONSE TO COMMENTS

The NWP accepted comments on the draft AOP from March 22 through April 24, 2015, with an extension to May 8, 2015. This section provides a summary of comments we received during the public comment period and our responses, as required by the Revised Code of Washington (RCW) 34.05.325(6)(a)(iii).

Revision B. of the AOP was considered by Ecology to be significant enough from a structural formatting basis that the entire AOP was opened for comment by the public. Requirements for many emission/discharge points did not change between Revision A and B, but the change in format and grouping would make it difficult to specify what did and what did not change. It was decided to open the entire AOP, Revision B, to comments to minimize any potential confusion on the part of commenters. Responses 1 through 109 are on comments received for the complete Revision B of the Hanford AOP and comments 110 through 124 are from the Renewal 2 and Revision A of the Hanford AOP.

Each comment is addressed separately. Please refer to the References section of this document for Exhibits A through H. The NWP's responses directly follow each comment in italic font. Verbatim copies of all written comments are attached in Appendix B.

### **Comment # 1 from Bill Johns, dated March 23, 2015**

"If we were building with paper everything would be done. Enough is enough. Diesels temp or permanent. You guys are making it impossible to complete anything with a reasonable cost and timeframe. Stop it!"

#### ***Ecology Response:***

*The Hanford Air Operating Permit (AOP) was created under rules and regulations to implement both the Federal Clean Air Act and the Washington Clean Air Act. Both Acts have numerous parts specific to certain industrial activities (e.g. coal fired power plant, cement kiln, etc...) or specific to types of emission units (e.g. stationary diesel engines). Both Acts also require the creation of a single Permit (the AOP) to contain all of the various and distinct permits a permittee is required to follow. This allows for the permittee, the regulatory agency, and the public to go to one Permit and determine requirements for the site.*

### **Comment # 2 from Bill Green, emails dated March 25 to March 26, 2015**

1. "I downloaded the documents supporting Revision B to the Hanford Site AOP and noticed the Attachment 2 file appeared unchanged from the version in Revision A. Ecology's public announcement stated the scope of Revision B included a new radioactive air emissions license. Would it be possible to get an electronic copy of Health's new license?"
2. Two of the reasons I am suspicious the included file for Attachment 2 was incorrect are:
  1. the date of the signature is August 30, 2013; and 2. the definitions from WAC 246-247 on page 9/843 do not reflect Health's most current rulemaking where the definition of "license" was changed.

3. Ecology's announcement (Publication # 15-05-003) specifically states: "the Washington State Department of Health has issued a new radioactive air emissions license." The announcement strongly implies incorporating this new license is a major reason for the revision. Is Ecology's announcement correct?

***Ecology Response:***

1. Attachment 2 is indeed the new FF-01 license issued by the Department of Health.
2. The signature was not changed because the Department of Health only updates the signature page when they change general conditions. The Department of Health will examine their license process and evaluate the potential to update the license in some manner to reflect the effective or issue date of the license
3. Ecology's announcement is correct. The license in AOP Revision B is a revision (e.g. new) from the license in Revision A.

**Comment # 3 from Mike Conlan, dated April 1, 2015**

"It makes sense to have all the info for air emissions in one database - that really should have been done years ago - government does move at a snail's pace esp. w/pollution issues (lobbyists).  
Hanford:

- 1) completely clean the Hanford site -
- 2) don't allow anymore radioactive waste on Hanford -
- 3) get the radiation out of the ground water seeping into the Columbia"

***Ecology Response:***

1. The Hanford Air Operating Permit covers active emissions to the atmosphere. It is not a Permitting mechanism in and of itself to clean-up the Hanford Site. Other Programs on the Hanford Site (e.g. the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)) are used to clean-up the Hanford Site
2. The Hanford Air operating Permit has no authority over the allowance of radioactive waste on Hanford. It covers any emissions from sources (toxic or radiological) on the Hanford Site.
3. The Hanford Air Operating Permit covers 'air' emissions. Groundwater contamination is covered under other programs (e.g. CERCLA).

*No changes to the Permit are required.*

**Comment # 4 from Reed Kaldor, representing USDOE, dated March 18, 2015**

Thank you for the letter. One thing I noticed is that in the current version of the FF-01 license, EU 1419 in Table 2-1 is identified as J-969W1, I think it should have been J-696W1. This would keep the nomenclature similar to the stack nomenclature when it was EU 62 and make it easier to track the change in the future if needed. Probably not a big deal but I thought I would bring it to your attention

***Ecology Response:***

*The commenter is correct. This correction will be placed in the Addendum to Attachment 2.*

**Comment # 5 from Bill Green, dated April 23, 2015 (Mr. Green comment #1)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**The regulatory structure of this draft AOP is contrary to Clean Air Act (CAA) section 502(b)(5)(E)<sup>1</sup> [42 U.S.C. 7661a (b)(5)(E)] and 40 C.F.R. 70.11 (a), because this structure does not provide Ecology, the sole permitting authority, with the legal ability to enforce all standards or other requirements controlling emissions of radionuclides, a hazardous air pollutant under CAA § 112 [42 U.S.C. 7412].**

***Ecology Response:***

*The commenter claims that Ecology, does not have adequate authority to enforce the radionuclide requirements in a license issued by Health that are part of an air operating permit. This issue was previously raised in inquiries to the United States Environmental Protection Agency (EPA) and the Washington State Department of Health. Those agencies responded to the inquiry in letters dated October 11, 2012 and July 16, 2010 which are attached as Exhibit A and B respectively.*

*This issue was also raised and responded to by the EPA in their order granting in part and denying in part two petitions for objection to permits (attached as Exhibit F).*

*Please see Exhibit A at p. 1-4; Exhibit B at p. 3, Issue 1, Exhibit F at p. 12 - 13 Claim 1*

*No change in the AOP is required*

**Comment # 6 from Bill Green, dated April 23, 2015 (Mr. Green comment #2)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**The regulatory structure used in this draft AOP does not allow Ecology, the sole permitting authority, to issue a Title V permit containing all standards or other requirements controlling emissions of radionuclides, a hazardous air pollutant under CAA § 112, contrary to Clean Air Act (CAA) section 502 (b)(5)(A)<sup>1</sup> [42 U.S.C. 7661a (b)(5)(A)], 40 C.F.R. 70<sup>2</sup>, and WAC 173-401<sup>3</sup>.**

***Ecology Response:***

*Please see the response to comment # 5.*

*No change in the AOP is required.*

**Comment # 7 from Bill Green, dated April 23, 2015 (Mr. Green comment #3)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**The regulatory structure used in this draft AOP does not allow Ecology, the sole permitting authority, to offer for public review AOP terms and conditions controlling Hanford's radionuclide air emissions, contrary to Clean Air Act (CAA) section 502 (b)(6)<sup>1</sup> [42 U.S.C. 7661a**

**(b)(6)], 40 C. F.R. 70.7 (h)<sup>2</sup>, RCW 70.94.161 (2)(a) & (7)<sup>3</sup>, and WAC 173-401-800<sup>4</sup>. Nor can Ecology provide for a public hearing on AOP terms and conditions controlling Hanford's radionuclide air emissions. Radionuclides are a hazardous air pollutant under CAA § 112.**

***Ecology Response:***

*Please refer to Exhibit A, last paragraph of p. 5 -p. 6; Exhibit B, Issue No.2, pp.3-4; Exhibit C, p.2; and Exhibit F, p. 23*

*The Exhibits specifically address the applicability of public notice requirements to underlying requirements.*

*The FF-01 license is completed by the Department of Health and sent as a unit to the Department of Ecology for inclusion into the Hanford Air Operating Permit (AOP) as an applicable requirement. The mechanism to change the FF-01 license is not part of the AOP process under Washington Administrative Code 173-401. However, if a correction needs to be represented in the AOP to correct any errors or emissions contained in the license with respect to Subpart H, an addendum will be added to Attachment 2 of the AOP, as Ecology also has authority to enforce the NESHAP. The addendum will contain requirements that the Permittee will have to abide by in addition to the requirements of Attachment 2.*

*No change in the AOP is required.*

**Comment # 8 from Bill Green, dated April 23, 2015 (Mr. Green comment #4)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Contrary to Clean Air Act (CAA) section 502 (b)(6)<sup>1</sup> [42 U.S.C. 7661a (b)(6)], 40 C.F.R. 70.4(b)(3)(x) and (xii)<sup>2</sup>, and WAC 173-401-735 (2)<sup>3</sup>, the regulatory structure used in this draft AOP to control Hanford's radionuclide air emissions does not recognize the right of a public commenter to judicial review in State court of the final permit action.**

***Ecology Response:***

*Please refer to Exhibit A, last paragraph of page 5 and continued onto page 6, Exhibit B, Issue No. 3, pp. 4-5, Exhibit C, p. 1, and Exhibit F, p. 23*

*The requirements of Health license issued under state law is appealable within the timeframe provided after the license is issued, but only the applicant or licensee can appeal under RCW 70.98.080, 70.98.130(3) and RCW 43.70.115. But, per the EPA Order (Exhibit F), bottom of page 24 – 25 and footnote 18, any conditions in the Health license that are used to address federal requirements are appealable to the PCHB at the time the AOP is issued/finalized.*

*No change in the AOP is required.*

**Comment # 9 from Bill Green, dated April 23, 2015 (Mr. Green comment #5)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**The regulatory structure used in this draft AOP does not require pre-issuance review by a professional engineer or staff under the direct supervision of a professional engineer in the employ of the permitting authority for any term or condition controlling Hanford's radionuclide air emissions, contrary to RCW 70.94.161 (2)(a)<sup>1</sup> and WAC 173-400-700 (1)(b).**

***Ecology Response:***

*A requirement of pre-issuance professional engineer review isn't directly required for underlying conditions (e.g. FF-01 license). The underlying requirements to the Hanford Air Operating Permit (AOP) (e.g. Ecology Approval Orders, Health FF-01 License, etc...) have been finalized prior to revision of the AOP. This issue was addressed by the United States Environmental Protection Agency in Exhibit A, page 6, second full sentence which stated "... Part 70 cannot be used to revise or change applicable requirements."*

*The AOP incorporated all of the applicable requirements, was prepared by and engineer, and will be stamped by a licensed professional engineer in the State of Washington who is in the employ of the Department of Ecology.*

*No change in the AOP is required.*

**Comment # 10 from Bill Green, dated April 23, 2015 (Mr. Green comment #6)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**In this draft Hanford Site AOP, regulate radionuclide air emissions in accordance with WAC 173-400 rather than in accordance with WAC 246-247. Radionuclides regulated as an applicable requirement under WAC 173-401, require pre-issuance review by the public, affected states, and EPA; are subject to judicial review by the Pollution Control Hearings Board; and can be enforced by Ecology; all of which satisfy requirements of the Clean Air Act. Radionuclides regulated pursuant to WAC 246-247 cannot satisfy these CAA requirements.**

***Ecology Response:***

*Please see the response to Comment # 7, Exhibit A, Exhibit B, Exhibit C, and Exhibit F.*

*No change in the AOP is required.*

**Comment # 11 from Bill Green, dated April 23, 2015 (Mr. Green comment #7)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**In this draft Hanford Site AOP regulation of radionuclides is inappropriately decoupled from 40 C.F.R. 70 (Part 70). Regulation of radionuclides occurs pursuant to a regulation that does not implement Part 70, is not authorized by EPA to implement Part 70, and cannot be enforced by Ecology, the issuing permitting authority**

***Ecology Response:***

*Please refer to Exhibit A and Exhibit F.*



*No change in the AOP is required.*

**Comment # 12 from Bill Green, dated April 23, 2015 (Mr. Green comment #8)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Provide an accurate inventory of regulated air pollutants expected from Tank Farm point sources and fugitive sources that is consistent with the findings of the Hanford Vapor Report1.**

***Ecology Response:***

*Ecology does not question the data presented in the Hanford Tank Vapor Assessment Report (TVAR), but the applicability or relevancy of the data to the Federal Clean Air Act and the Washington Clean Air Act is not clear as the data is lacking important meta-data (e.g. where was the sample collected, how was the sample collected, what protocols were used for sample collection, etc.).*

*Ecology doesn't have access to the actual data presented in the TVAR and can only depend on the information as presented in the report. This raises a question on how relevant the data are for use in determining ambient air concentration data to be compared to acceptable source impact level (ASIL) values of Washington Administrative Code 173-460.*

*The objective of the Hanford Tank Vapor Assessment Team is stated on page 12 of 153 of the TVAR as "WRPS asked the Savannah River National Laboratory (SRNL) to assemble and lead the Hanford Tank Vapors Assessment Team (TVAT) 2014 to determine the adequacy of the established WRPS program and prevalent site practices to protect **workers** from adverse health effects of exposure to the chemical vapors on the Hanford tank farms." [emphasis added]*

*Approval Orders incorporated into the AOP as applicable requirements were issued under the Clean Air Act (CAA) and its amendments regulating ambient air. Ambient air is defined in 40 CFR Part 50.1 (e) as "... that portion of the atmosphere, external to buildings, to which the general public has access." [emphasis added] In addition, WAC 173-460-070 requires compliance with the state TAPs requirements to be demonstrated "in any area to which the applicant does not restrict or control access." The Hanford site is land owned or controlled by the source and to which general public access is precluded by a fence or other physical barriers. The air at the Hanford Site doesn't qualify as ambient air. Therefore, the State TAP requirements need not be met within the boundaries of the Hanford Site. However, on-site personnel are covered by other laws, rules, and regulations in regards to their safety.*

*The Tank Farm emissions for double shell tanks (DSTs) in the original application for DSTs were based on a number of conservative assumptions designed to overestimate emissions:*

- 1) The highest emission rate from any given tank for each toxic air pollutant (TAP) was assumed to be the emission rate for that pollutant for all tanks in the Double Shell Tank (DST) tank farm. This results in a 'worse case tank' in regards to TAPs emitted.*
- 2) When a TAP had values below the laboratory detection limit, the laboratory detection limit was assumed to be the TAP's value.*



- 3) Based upon mixer pump tests in DST 241-AZ-101, it was assumed the headspace concentrations increased by a factor of 10 during waste mixing activities.
- 4) The maximum per tank emission rate was multiplied by a factor of 10 for each assumed mixing tank and 1 for each quiescent tank.
- 5) The AY/AZ tank system has four tanks, so the multiplication factor was 22 (2 mixed tanks for 20 and 2 quiescent tanks for 2 more, yielding 22). However, the AP tank farm contains 8 tanks (2 mixed tanks and 6 quiescent tanks) for a multiplication factor of 26. As 26 is the more conservative value, 26 was used as the multiplication factor for all emissions from both the AY/AZ tank farm, the SY tank farm and the AP tank farm.

*The concentrations of all of the TAPs were standardized to mg/m<sup>3</sup> at 25°C to allow for uniformity and then multiplied by the flow rate from the tank (provided by the exhaustor) and converted to a flux per tank in grams per second (g/s). The flux was multiplied by the dispersion factor determined from the approved modeling program to yield the maximum offsite concentration in µg/m<sup>3</sup>. This value was directly compared to the Acceptable Source Impact Levels (ASIL) from Washington Administrative Code 173-460-150.*

*The results indicated that dimethyl mercury was the only compound that had a calculated value in excess of the ASIL value (3.23E-08 µg/m<sup>3</sup> and 1.00E-99 µg/m<sup>3</sup> respectively). It was for this exceedance the permittee applied for a Tier 2 analysis.*

*The next two TAPs closest to exceeding an ASIL limit were n-Nitrosodimethylamine (2.17E-4 µg/m<sup>3</sup> ASIL and 6.82E-5 µg/m<sup>3</sup> calculated) at ~ 31.4% of the ASIL and Chromium Hexavalent (6.40E-5 µg/m<sup>3</sup> ASIL and 2.63E-5 µg/m<sup>3</sup> calculated) at ~38.8% of the ASIL.*

*Dimethyl mercury is the only compound exceeding the ASIL values in WAC 173-460. No certified instrumentation currently exists to provide real time monitoring of dimethyl mercury emissions. Instrumentation does exist for mercury emissions, but this instrumentation measures all of the mercury being emitted (as elemental mercury) and is not specific to dimethyl mercury. Therefore, using a mercury monitor would not be indicative of dimethyl mercury release values. In addition, elemental mercury has a distinct and different ASIL value from dimethyl mercury, and, while a mercury monitor would provide information relevant to the elemental mercury ASIL, it would not provide information relevant to the dimethyl mercury ASIL. Because real-time monitoring of dimethyl mercury is not possible, analysis of dimethyl mercury in the emissions would require collecting a sample, submitting the sample to a laboratory, waiting for analysis and notification of results, and then comparing the results to emission limits, a process that typically takes weeks or months. As this process isn't timely, it was deemed prudent to select a more readily measured compound to use as a surrogate for dimethyl mercury.*

*The permit was based upon the highest measured value for each pollutant emitted from all quiescent tank sampling events. Ecology used these values to establish the ratio between the emissions of all tank emission compounds. This ratio was the basis for estimating compound-by-compound emissions values from dispersion modeling. Using this ratio, it is possible to estimate the emissions of any emitted compound if the emissions of just one compound has been measured. Consistent with this analysis, NOC approval order DE14NWP-001 Rev 3 uses measured emissions of ammonia to estimate emissions of dimethyl mercury. Thus Ecology is not*

*considering all toxic air pollutants expected from the tank to be ammonia, but is using ammonia and the modeled ratio between ammonia and all other toxic air pollutants.*

*Ammonia was selected as a surrogate for dimethyl mercury as it:*

- 1) Can be directly measured using monitoring equipment.*
- 2) Is emitted from the tanks in concentrations facilitating measurement with a variety of instruments.*
- 3) Has EPA established sampling and analysis protocols*

*Ecology used the ratio representation approach outlined above to use ammonia emission concentrations to determine the dimethyl mercury emission concentrations. The dimethyl mercury emission concentration from the dispersion modeling has a corresponding emission concentration for ammonia. It is this ammonia value that Ecology is using as a surrogate measurement.*

*As discussed above, the assumptions used in preparing the modeling for the applicable requirement was a conservative estimate and covers the emission levels presented in the TVAR. Therefore, no change is required to the Permit.*

**Comment # 13 from Bill Green, dated April 23, 2015 (Mr. Green comment #9)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Reopen Hanford's AOP in accordance with 40 C.F.R. 70.7 (f)(1)(iii) & (iv) and revise Tank Farm emission limits, monitoring, and sampling to be consistent with the regulated air pollutants expected pursuant to the Hanford Vapor Report (W.R. Wilmarth et al., Hanford Tank Vapor Assessment Report, SRNL-RP-2014-00791, Oct. 30, 2014)<sup>1</sup>. The Hanford Vapor Report establishes that all previous estimates of emissions by the permittee understated both the number of regulated air pollutants and the concentration of these regulated air pollutants in Tank Farm emissions from both point sources and from fugitive sources. Absent an accurate assessment of emissions, Ecology cannot establish appropriate emission controls, emissions limits, and monitoring, reporting, and recordkeeping conditions that assure continuous compliance with requirements of the federal Clean Air Act (CAA).**

**Based on the findings in this report, the Washington State Attorney General served the U.S. Department of Energy and the responsible Hanford contractor with a Notice of Endangerment and Intent to File Suit (NOI) under the Resource Conservation and Recovery Act (RCRA). (NOI enclosed as Enclosure 3.) A second NOI regarding these same worker exposures was filed by Hanford Challenge, the Washington Physicians for Social Responsibility, and the United Association of Plumbers and Steamfitters, Local Union 598, the local union which represents the exposed workers**

***Ecology Response:***

*Please see response to comment # 12.*

*Additionally, as the commenter states, the Notice of Endangerment and Intent to File Suit (NOI) was issued under the Resource Conservation and Recovery Act (RCRA) for worker endangerment.*

*It was not issued under the Clean Air Act because the CAA regulates ambient air and the workers are not in ambient air as explained in response to comment # 12.*

*No change to the permit is needed.*

**Comment # 14 from Bill Green, dated April 23, 2015 (Mr. Green comment #10)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Supply a schedule of compliance<sup>1</sup> as required by 40 C.F.R. 70.6(c)(3) and WAC 173-401-630 (3) for establishment of monitoring and for identification and control of emissions of previously unaccounted for hazardous air pollutants (HAPs) and toxic air pollutants (TAPs), including those associated with transient peaks in release rates from Tank Farm emissions units. Also, in accordance with 40 C.F.R. 70.7 (h) and WAC 173-401-800, provide the public with the opportunity to review the schedule of compliance, and any resulting applicable requirements Ecology incorporates into the Hanford Site AOP.**

***Ecology Response:***

*Please see responses to comments # 12 and # 13.*

*Additionally, the underlying Notice of Construction Approval Orders incorporated into this AOP as applicable requirements considered the emissions for the discharge points covered by those NOCs. The impact to ambient air was evaluated at that time using modeled impacts to the ambient air from the best available sample data and application of conservative assumptions. From these evaluations Approval Orders were issued to the Permittee to operate the emissions points.*

*A schedule of compliance is not required because hazardous air pollutants (HAPs) and toxic air pollutants (TAPs) have not reached ambient air in concentrations requiring action or have already been assigned permit conditions in the underlying applicable requirement (e.g. NOC permit). WAC 173-460-150 is used with TAPs to determine when modeling is required. The processes in WAC 173-460 have been followed for NOC Approval Orders that have become incorporated into this AOP. HAPs are regulated via the NESHAPs, which are also incorporated into the AOP. As such, the requirements for HAPs and TAPs have been incorporated into the AOP, and the permittee is required to follow those requirements, so there is no need for a schedule of compliance.*

*No change to the permit is needed.*

**Comment # 15 from Bill Green, dated April 23, 2015 (Mr. Green comment #11)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Provide emission limits, and associated monitoring, reporting, and recordkeeping requirements sufficient to assure continuous compliance with any requirements for control of all regulated air pollutants anticipated by the Hanford Vapor Report<sup>1</sup> and expected from Tank Farm emissions units<sup>2</sup>.**

**The word “person” is defined in the CAA without any association to any property boundary.**

**Additionally, criminal enforcement under 42 U.S.C. 7413 [CAA § 113] applies to harm suffered by a “person”, without reference to the location of that “person” when harmed.**

***Ecology Response:***

*Please see responses to comments #12, #13, and # 14.*

*Additionally, the requirements for monitoring, reporting, and recordkeeping is specific to each emission unit and related to the type of emission being monitored. Each emission unit has the appropriate monitor requirements in the issued approval order for that unit. These requirements become part of the AOP monitoring, reporting, and record keeping requirements. As such, each emission unit is currently properly monitoring, reporting, and recordkeeping emission data. It is agreed that certain emission units have different points of compliance (e.g. opacity at the stack, HAPS and TAPS in ambient air, etc...), but these are addressed in the NOC approval orders and the AOP.*

*The commenter points out that the federal Clean Air Act defines “person” without reference to the site boundary, and makes it a criminal offense to place a “person” in imminent danger, without reference to the location of that “person” when harmed, citing 42 USC 7413 [CAA § 113]. The commenter neglects to note that the provision cited, 42 USC 7413(c)(4) makes it unlawful for any person to “negligently release into the **ambient air** any hazardous air pollutant...” [emphasis added]. Ambient air has been defined previously (see comment # 13) and ambient air is a location. Thus, the CAA protects people located in ambient air.*

*Ecology agrees with the commenter that permits must “... be adequate to determine whether any hazardous air pollutant or extremely hazardous air pollutant released into the environment could harm any “person”.” But this requirement is applicable to ambient air and the current monitoring, reporting, and recordkeeping for the underlying requirement are adequate to meet this requirement.*

*No change in the permit is required.*

**Comment # 16 from Bill Green, dated April 23, 2015 (Mr. Green comment #12)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**This draft Hanford Site AOP omits regulation of radon, the only radionuclide identified by name as a hazardous air pollutant in section 112 of the Clean Air Act (CAA).**

***Ecology Response:***

*Radon has not been overlooked. WAC 246-247-020 (4) and 40CFR61.91(a) (both referenced in the General Conditions of Attachment 2) allow the exclusion of naturally occurring radon and its respective decay products unless the concentrations or rates of emissions have been enhanced by industrial processes. This is the case at most of the Hanford site. However, where this is not the*

*case, radon has been addressed. For example at the 325 building, which has a radon generator as part of its licensed process (see EU ID 361), radon emissions are tracked and reported. Also see Exhibit F page 26 – 29*

*No change in the AOP is required.*

**Comment # 17 from Bill Green, dated April 23, 2015 (Mr. Green comment #13)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**This draft Hanford Site AOP overlooks the Columbia River as a source of Hanford’s diffuse and fugitive emissions of radionuclides.**

***Ecology Response:***

*Under WAC 246-247, all registered and any unregistered sources of radioactive air emissions are monitored by DOE using ambient air samplers as described in Section 5 of Attachment 2 (FF-01). DOE reports the results of this monitoring program in the annual air emissions report. As a result of this monitoring, the Columbia River is not deemed a credible source of radionuclide air emissions.*

*In addition, EPA has evaluated the claim that the Columbia River is a source of emissions of radionuclides and has stated:*

*With regard to the Petitioner’s claim that the Columbia River should be regulated as a source of radionuclides in the Hanford Title V Permit, the Petitioner has not demonstrated that the permit unlawfully “overlooks the Columbia River as a source of diffuse and fugitive emissions of radionuclides” that must be regulated under the Hanford Title V Permit. By its terms, Subpart H applies to operations at DOE “facilities,” which is defined as “all buildings, structures and operations on one contiguous site.” 40 C.F.R. § 61.91(b). The Columbia River is not a building, structure or operation and thus not part of the DOE facilities subject to Subpart H. Moreover, the Hanford Site is regulated as a “major source” under the title V program. “Major source” is defined in the Part 70 regulations in part as “any stationary source (or any group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control (or persons under common control))....” 40 C.F.R. § 70.2; see also W.A.C. 173-401-200(34). “Stationary source,” in turn, is defined as building, structure, facility or installation that emits or may emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act.” 40 C.F.R. § 70.2; see also W.A.C. 173-401-200(19). The Petitioner has not demonstrated that the Columbia River is a stationary source under common control with DOE and we see no reason to conclude that it is part of the title V major source subject to the title V permit for the Hanford Site.*

*From Exhibit F, p.28.*

*No change in the AOP is required.*

**Comment # 18 from Bill Green, dated April 23, 2015 (Mr. Green comment #14)**



Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Clarify Section 4.6. Enforceability. Federally-enforceable requirements include any requirement of the CAA, or any of its applicable requirements, including CAA § 116 [42 U.S.C. 7416] and any requirements in 40 C.F.R. 70.**

***Ecology Response:***

*Please see exhibit F, pp. 15 and 16 for CAA § 116. Ecology agrees with the EPA on this issue.*

*Attachment 2, did not overlook the requirement where both a federal requirement and a state (or local) requirement apply to the same source, both must be included in the AOP.*

*Attachment 2 contains a section titled “DOE Federal Facilities 40CFR61 Subparts A, H, and WAC 246-247 Standard Conditions and Limitations” at the start of the Attachment. The conditions in this section apply to all of the individual licenses on an emission unit basis and indicate the Federal and State only requirements.*

*Additionally, each emission unit will call out additional citations (Federal or State), as required, that apply to that particular emission unit.*

*As the citations are already listed as federally enforceable or “State only”, no change in the permit is required.*

**Comment # 19 from Bill Green, dated April 23, 2015 (Mr. Green comment #15)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Specify the appeal process applicable to AOP terms and conditions in Attachment 2 that are created and enforced by Health pursuant to RCW 70.98 and the regulations adopted thereunder.**

***Ecology Response:***

*The appeal process for the AOP is presented in section 4.12 of the Standard Terms and General Conditions and Attachment 2 is part of the AOP.*

*As discussed in the response to comment no. 8, any conditions in the Health license that are used to address federal requirements are appealable to the PCHB at the time the AOP is issued/finalized*

*No change in the AOP is required.*

**Comment # 20 from Bill Green, dated April 23, 2015 (Mr. Green comment #16)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**State that changes allowed by sections 5.19 and 5.20 only apply to Attachment 1 and Attachment 3. The statute and the regulation under which Attachment 2 was created do not recognize either “Off-permit Changes” or “Changes Not Requiring Permit Revisions”**

***Ecology Response:***

*Ecology agrees. The language will be changed to:*

*5.19.1 The source shall be allowed to make changes to Attachment 1 not specifically addressed or prohibited by the permit terms and conditions without requiring a permit ... ”*

*“5.20.1 Permittee is authorized to make the changes described in this section to Attachment 1 without a permit revision, providing the following conditions are met”*

**Comment # 21 from Bill Green, dated April 23, 2015 (Mr. Green comment #17)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**After line 39 on page 28 add the phrase “or other such address as provided by Ecology”. After the EPA address on page 29 add the phrase “or other such address as provided by EPA”. These additions will avoid a technical violation should either Ecology or EPA change addresses during the term of the AOP**

***Ecology Response:***

*Ecology agrees. The language will be changed to:*

*On page 28, lines 33 and 34 “Notification shall be submitted to Ecology to the address below or as provided by Ecology:”*

*On page 28, line 41 “and EPA Region 10 to the address below or as provided by Ecology or EPA:”*

**Comment # 22 from Bill Green, dated April 23, 2015 (Mr. Green comment #18)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**After Ecology’s address, add the phrase “or other such address as provided by Ecology”. After the EPA address, add the phrase “or other such address as provided by EPA”. These additions will avoid a technical violation should either Ecology or EPA change addresses during the term of the AOP.**

***Ecology Response:***

*Ecology agrees. The language will be changed to:*

*On page 29, lines 30 and 31 “Notification shall be submitted to Ecology to the address below or as provided by Ecology:”*

*On page 29, line 38 “and EPA Region 10 to the address below or as provided by Ecology or EPA:”*

**Comment # 23 from Bill Green, dated April 23, 2015 (Mr. Green comment #19)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Missing from Table 1.4 are conditions from BCAA Administrative Order (AO) of Correction, No. 20030006, for control of fugitive dust from the Marshalling Yard. Requirements from this AO survive for at least as long as the Marshalling Yard exists. According to EPA, requirements in an AO are to be treated as “applicable requirements” under Title V that must be included in a source’s AOP.**

***Ecology Response:***

*The Administrative Order (AO) is not in effect and is not an applicable requirement for the Hanford AOP. The was closed and disposed of, but the dust control requirements are found in the terms of the underlying requirement in Approval Order DE02NWP-002, Amendment 4. DE02NWP-002, Amendment 4 states a dust control plan shall be “developed and implemented”. Additionally, the dust control plan “shall be made “available to Ecology upon request.”*

*This issue has also been heard and resolved by the Pollution Control Hearings Board. See Bill Green v. Ecology and Department of Energy, PCHB NO. 07-012, Summary Judgment Order (Aug. 22, 2007), pp. 15 and 16. The Board noted, “We conclude that the plain language of WAC 173-401-200(4)(b), which includes statutes, rules, and orders as “applicable requirements,” does not extend to the specific content of the [dust control] Plan developed in response to the Order of Correction issued by BCAA. The Order itself required Energy to submit and implement a plan to control dust. These requirements are included in the AOP.”*

*No change in the AOP is required.*

**Comment # 24 from Bill Green, dated April 23, 2015 (Mr. Green comment #20)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Missing from the public review file is Dust Control Plan 24590-WTP-GPP-SENV-015, Revision 1, Fugitive Dust Control. Pursuant to 40 C.F.R. 70.7 (h)(2), all information Ecology deemed to be relevant by using it in the permitting process must be made available to support public review**

**Ecology thus acknowledges it utilized “24590-WTP-GPP-SENV-015, Revision 1, Fugitive Dust Control” in the permitting process. This plan should, therefore, have been included in the information provided to the public pursuant to 40 C.F.R. 70.7(h)(2) and *Sierra Club v. Johnson*, 436 F.3d 1269 (11th Cir. 2006)**

***Ecology Response:***

*Please see response to comment # 23.*

*In Sierra Club v. Johnson, the court determined that all information used by the permitting authority to develop the **air operating permit** must be made available to the public for public comment. The court did not require the permitting agency to make available to the public all*



*information used to develop the underlying applicable requirements that are included in an air operating permit.*

*The dust control plan is the permittee's document and under their direct control. The permittee updates the dust control plan as required for activities being performed. As such, the dust control plan does not become a direct permit document in the AOP. Because the document is not directly in the AOP and wasn't used as supporting material in the issuance of the AOP, no requirement exists to provide the dust control plan for public review at this time.*

*Additionally, with the dust control plan requirements found in the terms of the underlying requirement to the Air Operating Permit (AOP) in Approval Order DE02NWP-002, Amendment 4, the information used and deemed relevant and used in the permitting process was included in the original public comment period.*

*No change in the AOP is required.*

**Comment # 25 from Bill Green, dated April 23, 2015 (Mr. Green comment #21)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Correct "emission units" to read "emissions unit". It is "Emissions unit" that is defined in WAC 173-401-200 (12).**

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees the defined term in Washington Administrative Code (WAC) 173-401-200 (12) is "emissions unit". The statement was intended to convey to all of the multiple units on the site. Ecology will change the language from "emission units" to "emissions units"*

**Comment # 26 from Bill Green, dated April 23, 2015 (Mr. Green comment #22)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Delete the sentence beginning on line 9: "~~All emission units not identified in Section 1.4 Discharge Points that are subject to 40 CFR 61, Subpart H in Attachment 2, Health License, have been determined to represent insignificant sources of non-radioactive regulated air pollutants~~". Ecology can not use a permit to revise a regulation<sup>1</sup>, specifically WAC 173-401-530 (2)(a).**

***Ecology Response:***

*The sentence was intended to convey that discharge points not listed in Section 1.4 do not need compliance certification for non-radiological emissions. As it appears the current language might cause some confusion, the second sentence of the paragraph will be changed to, "[f]or these emission units no additional monitoring, reporting, or recordkeeping is necessary **beyond the requirements in Attachment 2.**"*

*For radiological emissions units, this sentence will guide the reader to Attachment 2 as the rest of the paragraph states.*

**Comment # 27 from Bill Green, dated April 23, 2015 (Mr. Green comment #23)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Re-evaluate Tank Farm emissions units<sup>1</sup> currently designated as insignificant emissions units (IEUs) based on requirements of WAC 173-401-530 (2)(a) and on findings in the Hanford Vapor Report<sup>2</sup>.**

**In addition, all Tank Farm emissions units were permitted using characterization information that greatly underestimated both the number of chemicals in the expected emissions and the respective concentrations of these chemicals.**

***Ecology Response:***

*The Tank Farm emissions have not been categorically designated as insignificant emission units. Section 1.4.25 and 1.4.26 are both permits for Tank Farm emissions units. Tank farm emissions have been and are evaluated against WAC 173-400, General Standards for Air Pollution Sources, to determine if they need to have a Notice of Construction Approval Order (permit) issued for their emissions. For Tank Farm emissions requiring an NOC permit, a permit is issued following the regulations of WAC 173-400. Upon issuance, the permit becomes a applicable requirement and is added to the AOP.*

*The AOP is not the appropriate vehicle for re-evaluating emissions from the tank farm emission units because the AOP merely collects into one document the requirements applicable to a facility, and does not add substantive requirements.*

*No permit change is required.*

**Comment # 28 from Bill Green, dated April 23, 2015 (Mr. Green comment #24)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Revise the emission limits, and requirements for monitoring, reporting, and recordkeeping for these discharge points (collectively “exhausters”) to reflect findings in the Hanford Vapor Report<sup>1</sup>. (See Enclosure 2)**

***Ecology Response:***

*Please see the responses to comments #12, # 13, # 14, and # 15.*

*Ecology is not disputing the Hanford Tank Vapor Assessment Report, but its results are not directly applicable to Clean Air Act regulations and permits because, there is no evidence the emissions identified in the Tank Vapor Assessment Report reach the ambient air. The units in question have been issued a permit conforming to the requirements of WAC 173-400. The permittee submitted a permit application for those units that gave the basis for the emission data, the conditions the units would operate under, and the concentration of toxic and hazardous air*

*pollutants in ambient air. Where the concentration of toxic air pollutants exceeded the Acceptable Source Impact Level, the permittee installed abatement control device(s) or requested a second tier evaluation of the emissions (see WAC 173-460). Federally listed hazardous air pollutants are subject to the NESHAPs. From this data and analysis, the permit conditions were developed. If evidence shows that these conditions are being violated, or that concentrations of HAPs or TAPS in the ambient air exceed those in the permit application, Ecology will take the appropriate actions.*

*The AOP is not the appropriate vehicle for re-evaluating emissions from the tank farm emission units because the AOP merely collects into one document the requirements applicable to a facility, and does not add substantive requirements.*

*In the meantime, as long as the Permittee complies with the Permit and the application conditions used to provide operating conditions, no need exists to revise the emission limits, or the requirements for monitoring, reporting, or recordkeeping.*

*No permit change is required.*

**Comment # 29 from Bill Green, dated April 23, 2015 (Mr. Green comment #25)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Address federally-enforceable requirements as specified in WAC 173-401-625, 40 C.F.R. 70.6 (b), and CAA § 116.**

***Ecology Response:***

*Please see the response for comment 18.*

*The Washington State Department of Health has not sought to avoid federal enforceability by incorporating federal requirements by reference, they have listed Federal and State-only requirements that apply to all licenses at the start of Attachment 2. Each individual emission unit will also list additional Federal or State-only requirements, as needed, in each specific emission unit.*

*The cited “state only enforceable: WAC 246-247-01094), 040(5), 060(5)” under the Abatement Technology section of an individual emission unit are for State-only requirements. The Federal regulations provide limits on emissions (e.g. effective dose equivalent of 10 mrem/yr), but doesn’t provide specifics on abatement technology. If the Federal requirements did list abatement technology, this would be listed at the start of the permit as applicable to all emission units.*

*No change in the AOP is required.*

**Comment # 30 from Bill Green, dated April 23, 2015 (Mr. Green comment #26)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**In Attachment 2, provide the specific monitoring, reporting, and recordkeeping requirements needed to demonstrate continuous compliance with each term or condition that appears in the annual compliance certification report required by 40 C.F.R. 70.6 (c)(5) and WAC 173-401-615 (5).**

***Ecology Response:***

*Note: There is no WAC 173-401-615(5); the monitoring, reporting and recordkeeping requirements are found in WAC 173-401-615 (1) - (4), while compliance certification requirements are found in WAC 173-401-630(5).*

*The requirements for each emission unit in Attachment 2 contains reference to abatement technology and monitoring requirements. For abatement technology, the technology (e.g. HEPA) is required to be in place and functional. The Licensee is required to certify the compliance status.*

*When multiple methods of certifying compliance is acceptable, it isn't required to specify one particular method over another. As a result, the Licensee can select the method that best fits into their work practices to certify compliance. As the case with abatement technology either being in place and functional or not, the person in charge of that system can verify by statement.*

*For the monitoring requirements for each emission unit in Attachment 2, the regulatory citation, monitoring and testing requirements, radionuclides requiring measurement, and sampling frequency is all specifically listed. The Licensee must follow the monitoring and testing requirements on the radionuclides required to be measured at a frequency specified in the license.*

*Where specific monitoring conditions are required, these conditions have been specified in Attachment 2. Where various methods of compliance certification are acceptable, a specific method has not been selected in order to allow the licensee flexibility to select the best method for them.*

*As each term or condition in the permit provides adequate information for the licensee to certify annual compliance status as required, no change in the AOP is required.*

**Comment # 31 from Bill Green, dated April 23, 2015 (Mr. Green comment #27)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Track and report the total potential radionuclide emissions allowed from individual emissions units specified in Attachment 2, Enclosure 1 Emission Unit Specific License.**

***Ecology Response:***

*No regulatory basis exists to require the summation of potentials to emit.*

*40 CFR 61, subpart H (§ 61.92) sets the emission standard at an effective dose equivalent of 10 mrem/yr on actual emissions from the Site. It is the actual emissions (abated) from the Site that the Licensee certifies to have meet the 10 mrem/yr requirement, not the potential to emit.*

*It is important to note that the potential to emit is the theoretical unabated emissions from the Site. It is not the actual (regulated) emissions from the Site. Potential to emit is used to determine Federal and State-Only monitoring requirements. It is also used to determine State-Only abatement control requirements.*

*No change in the AOP is required.*

**Comment # 32 from Bill Green, dated April 23, 2015 (Mr. Green comment #28)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**As required by 40 C.F.R. 70.7 (h)(2), provide the public with all information used in the permitting process to justify:**

- **adding six (6) new emission unit,**
- **removing nine (9) emissions units, and**
- **replacing about twenty-eight (28) Notice of Construction (NOC) orders of approval from the previous final version of Attachment 2<sup>1</sup>, and restart public review.**

***Ecology Response:***

*In Sierra Club v. Johnson, the court determined that all information used by the permitting authority to develop the **air operating permit** must be made available to the public for public comment. The court did not require the permitting agency to make available to the public all information used to develop the underlying applicable requirements that are included in an air operating permit. Attachment 2 is created under the authority of WAC 246-247 and provided to Ecology as a whole. Ecology accepts the FF-01 license “as-is” and incorporates it into the air operating permit. If any federally enforceable requirements are not in the FF-01 license (Attachment 2 of the Hanford AOP), Ecology will add them to the Hanford AOP in an addendum to Attachment 2 and the Permittee will have to abide by the addendum requirements in addition to the requirements in Attachment 2. Thus there is no requirement for Ecology to make available to the public all the information used by the Department of Health in developing the FF-01 license.*

*Nor does any requirement exist in WAC 246-247 for listing the changes in the FF-01 license. Even so, the Department of Health created a “Table of Changes” in the FF-01 License to provide a brief description of changes (starting on page 23 of Attachment 2) for the convenience of the reader even though it was not required to do so.*

*It is not necessary to restart the public comment and no change in the AOP is required.*

**Comment # 33 from Bill Green, dated April 23, 2015 (Mr. Green comment #29)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**The regulatory structure of the draft Hanford Site AOP does not provide Ecology, the sole permitting authority, with the legal ability to enforce the “National Emission Standards for Asbestos” (40 C.F.R. 61 subpart M). In this draft AOP asbestos requirements are created and enforced in accordance Benton Clean Air Agency (BCAA) Regulation 1, Article 8. Ecology can not enforce or otherwise act on BCAA regulations.**

***Ecology Response:***

*The delegation to the Benton Clean Air Agency is addressed in the Statement of Basis for Attachment 3. On page 5 of 14, lines 54 through 56, it states “In addition, we believe that RCW 70.105.240 does not give Ecology the option of delegating its final decision-making authority over preempted matters, notwithstanding any delegation to exercise day-to-day regulatory responsibility.”*

*Attachment 3 is part of the Hanford AOP as it is part of the applicable requirements for the Hanford Site. The day-to-day regulatory responsibility has been delegated to BCAA, but Ecology maintains final decision making and enforcement over the delegated regulations. With final decision making, Ecology has the legal ability to enforce the delegated regulatory responsibilities.*

*No change to the Permit is required,*

**Comment # 34 from Bill Green, dated April 23, 2015 (Mr. Green comment #30)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Line 1 on page iv of the Statement of Basis for Standard Terms and General Conditions contains the following statement: “Health regulates radioactive air emissions under the authority of RCW 70.92 . . .”. Citing to RCW 70.92 is incorrect. The title of RCW 70.92 is “PROVISIONS IN BUILDINGS FOR AGED AND HANDICAPPED PERSONS”.**

***Ecology Response:***

*Ecology agrees:*

*Line 1 on page iv of the Statement of Basis for Standard Terms and General Conditions will be changed from: “Health regulates radioactive air emissions under the authority of RCW 70.92 . . .” to “Health regulates radioactive air emissions under the authority of RCW 70.98 and 70.94....”*

**Comment # 35 from Bill Green, dated April 23, 2015 (Mr. Green comment #31)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Missing from the Statements of Basis is a discussion of the factual and legal basis for not including the Bechtel National, Inc., dust control plan in the draft Hanford Site AOP. This dust control plan for the Marshalling Yard, and the federal applicable requirements contained therein, is required by Administrative Order (AO) of Correction, No. 20030006, issued by the Benton Clean Air Agency on March 12, 2003.**

***Ecology Response:***

*Benton Clean Air Agency (BCAA) issued Administrative Order (AO) of Correction, No. 20030006 in conjunction with NOV 20030006. The enforcement action was closed October 16, 2003. The documents from the enforcement action were destroyed in accordance with the Records Retention Schedule per Disposition Authority Number AP65-01-02 Rev. 0.*



*In 2006, Ecology incorporated the WTP Marshalling Yard into DE02NWP-002 via Amendment 4 in response to a public comment made during review of AOP 00-05-006, Renewal 1. Separate dust control plans for both WTP locations continued to be implemented.*

*On March 3, 2010, the above WTP Dust Control Plans were consolidated into one plan with issuance of 24590-WTP-GPP-SENV-015, Revision 1, Fugitive Dust Control.*

*As the AO has been destroyed, nothing exists to be added to the AOP as an underlying requirement. Additionally, the requirements for a dust control plan for WTP are part of the AOP as an underlying requirement.*

*No change is required to the permit or Statement of Basis.*

**Comment # 36 from Bill Green, dated April 23, 2015 (Mr. Green comment #32)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Missing from the Statements of Basis is the memorandum of understanding between Ecology and Health describing the roles and responsibilities of each agency in coordinating the regulation of Hanford's radionuclide air emissions. This memorandum of understanding<sup>1</sup> is referenced on page 4 of the legal opinion<sup>2</sup> required by 40 C.F.R. 70.4 (b)(3).**

***Ecology Response:***

*Please see the response to comments #5, #6, #7, and #8.*

*The legal and factual basis each Agency (e.g. Ecology and Health) regulating the Hanford Site is established in WAC 173-401 and WAC 246-247. The memorandum of understanding was designed to aid coordination between the agencies and not as a legal and factual basis for regulating the Hanford Site. As such, it is not required to have the memorandum in the Statements of Basis.*

*However, Ecology will add a sentence to the Statement of Basis for the Standard Terms and General Conditions with an internet link to the Memorandum*

*No change is required in the Statements of Basis.*

**Comment # 37 from Bill Green, dated April 23, 2015 (Mr. Green comment #33)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**Contrary to 40 C.F.R. 70.7 (a)(5) and WAC 173-401-700 (8), the permitting authority failed to address the legal and factual basis for regulating radioactive air emissions in the draft Hanford Site AOP pursuant to *The Nuclear Energy and Radiation Act (NERA)* rather than in accordance with the *Clean Air Act (CAA)*.**

***Ecology Response:***

*Please see Exhibit A and Exhibit F.*

*No change is required.*

**Comment # 38 from Bill Green, dated April 23, 2015 (Mr. Green comment #34)**

Ecology is only showing the first paragraph of this comment in this summary. For the complete comment with all citations, footnotes, and explanations, please refer to Exhibit D.

**In accordance with 40 C.F.R. 70.7 (a)(5) and WAC 173-401-700 (8), provide the legal and factual basis for omitting the Columbia River as a source of radionuclide air emissions.**

***Ecology Response:***

*EPA has evaluated the claim and Ecology agrees that the Columbia River is a source of emissions of radionuclides and has stated:*

*With regard to the Petitioner's claim that the Columbia River should be regulated as a source of radionuclides in the Hanford Title V Permit, the Petitioner has not demonstrated that the permit unlawfully "overlooks the Columbia River as a source of diffuse and fugitive emissions of radionuclides" that must be regulated under the Hanford Title V Permit. By its terms, Subpart H applies to operations at DOE "facilities," which is defined as "all buildings, structures and operations on one contiguous site." 40 C.F.R. § 61.91(b). The Columbia River is not a building, structure or operation and thus not part of the DOE facilities subject to Subpart H. Moreover, the Hanford Site is regulated as a "major source" under the title V program. "Major source" is defined in the Part 70 regulations in part as "any stationary source (or any group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control (or persons under common control))...." 40 C.F.R. § 70.2; see also W.A.C. 173-401-200(34). "Stationary source," in turn, is defined as building, structure, facility or installation that emits or may emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act." 40 C.F.R. § 70.2; see also W.A.C. 173-401-200(19). The Petitioner has not demonstrated that the Columbia River is a stationary source under common control with DOE and we see no reason to conclude that it is part of the title V major source subject to the title V permit for the Hanford Site.*

*Exhibit F at p. 28.*

*No change in the permit is required.*

**Comment # 39 from Jeanne Poirier, dated May 6, 2015**

"Please add my name to the concerned citizens living in proximity to Hanford.

While a challenge for clean up, please adhere to EPA rules on clean air standards.

Good monitoring of potentially harmful emissions is critical to safety at Hanford."

***Ecology Response:***

*Ecology has added your name to the list of concerned citizens living in proximity to Hanford.*

*Ecology is following the requirements of the Federal and Washington Clean Air Acts in regulating the Hanford Site. Ecology strives to uniformly apply these regulations, regardless of the Permittee's size, location, ownership (e.g. Government or Private), or activity being regulated.*



*No change to the Permit is required.*

**Comment # 40 from Jean Vanni, dated May 6, 2015**

“I’m requesting that Ecology explain what are the PTE zones and how their analysis is performed and include a map within the AOP”

***Ecology Response:***

*The PTE zones are derived from model results for specific discharge points or emissions units. These results are used to determine levels of risk and requirements for abatement, monitoring, etc...Each emission point generates a different PTE result for different locations. The information is part of the Notice of Construction application for radiological/toxic emissions and generated on a permit/license basis.*

*USDOE provides the information on PTE for the Hanford Site. As this information is generated on a NOC by NOC basis, a composite PTE doesn’t exist. Ecology and Health lack the resources to composite all of the PTE data to generate a PTE map and then maintain the PTE map during each NOC application or modification.*

*Additionally, no requirement exists for USDOE to provide a composite PTE map for the Hanford site.*

*No change in the AOP is required.*

**Comment # 41 from USDOE, dated May 6, 2015**

Item a. in this section refers to Attachment 1, Section 2.4 but it appears the reference should be to Section 1.4.

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees the referenced sections should be “Section 1.4” and. the text has been corrected.*

**Comment # 42 from USDOE, dated May 6, 2015**

“Engines that are subject to only NESHAP and NSPS requirements are not subject to opacity requirements.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Washington Administrative Code (WAC) 173-400-040 (1) states, "All sources and emissions units are required to meet the emission standards of this chapter." Engines that are subject to only NESHAP and NSPS are not explicitly excluded from meeting opacity requirements or have specific opacity requirements established for them. As a result, the general requirements of WAC 173-400-40 are applicable.*

*No change is needed to the Air Operating Permit.*

**Comment # 43 from USDOE, dated May 6, 2015**

“Please clarify what is meant by “certification” in the “Periodic monitoring” column of the SO<sub>2</sub> requirement. Is this referring to fuel type certification or engine emission certification?”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees the term certification is ambiguous. It was the intent for the certification to be for Ultra Low Sulfur fuel.*

*Ecology is changing the text in the column from “recordkeeping or certification” to “Recordkeeping of the certification that Ultra Low Sulfur Fuel was used.”*

**Comment # 44 from USDOE, dated May 6, 2015**

“Are either EPA Method 6 or Method 6C appropriate to use for engines? These methods pertain to stack sampling and continuous monitoring. Neither method appears to be appropriate for many of the discharge points in Section 1.4 (e.g., engines that are only subject to the requirements of 40 CFR 63 Subpart ZZZZ).”

***Ecology Response:***

*Ecology offers the following explanation.*

*EPA Method 6 states in 1.2 “Applicability. This method applies to the measurement of sulfur dioxide (SO<sub>2</sub>) emissions from stationary sources.” and EPA Method 6C “is a procedure for measuring sulfur dioxide (SO<sub>2</sub>) in stationary source emissions using a continuous instrumental analyzer.”*

*Both of the EPA Methods are for use with stationary sources and all of the discharge points in the Hanford Air Operating Permit are stationary sources. As a result, the EPA Methods are applicable.*

*Please note that the “Test method” column includes a footnote that, states “The test methods identified in this table are used as compliance verification tools. A frequency is not applicable unless specified in the table.” Thus it isn’t a requirement to perform either of the EPA Methods on a specific periodic basis. By specifying the test method, the Permittee, Ecology, and the General Public are aware of what tests to follow when a compliance verification tool is needed.*

*No change to the Permit is required.*

**Comment # 45 from USDOE, dated May 6, 2015**

“In the first paragraph the sentence “Also the compliance certification is not required for IEUs” has been deleted. This sentence provides important clarification and should be retained.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Washington Administrative Code 173-401-530 (2)(d) describes how the to certify IEUs where testing, monitoring, recordkeeping and reporting are performed. Thus, compliance certification is required and the sentence as written is correct.*

*No change to the Permit is required.*

**Comment # 46 from USDOE, dated May 6, 2015**

“The introductory text to this section states “all emission units identified in this Section are subject to the general requirements listed in Table 1.1.” It is believed that some of the requirements in Table 1.1 (in particular opacity and sulfur dioxide) are not intended to be specifically applied to certain discharge points in Section 1.4. (See comment 2 above) Please clarify the introductory text as appropriate.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Please see responses to Ecology Comment # 42, 43, 44, and 45. The general requirements are applicable requirements for all Section 1.4 Discharge Points. Washington Administrative Code (WAC) 173-400-040 (1) states, "All sources and emissions units are required to meet the emission standards of this chapter." {emphasis added}*

*As the requirement applies to all sources, then all sources in section 1.4 are subject to the general requirements.*

*No change to the permit is required.*

**Comment # 47 from USDOE, dated May 6, 2015**

“13-NWP-043 (dated April 24, 2013) transmitted Approval Order DE02NWP-001, Revision 2 to the Office of River Protection. The letter stated that the Order would be incorporated into the first revision of AOP Renewal 2. The Order has yet to be incorporated. Please incorporate Approval Order DE02NWP-001, Revision 2, into AOP Renewal 2, Revision B. (Specific comments are noted below.)”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees that all of the changes in Approval Order DE02NWP-001, Rev. 2 and PSD-02-01, Amendment 3, were not incorporated. See Ecology Comments 48 through 69 for details.*

**Comment # 48 from USDOE, dated May 6, 2015**

“PSD-02-01 is currently Amendment 3 (not Amendment 2)”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The Requirement Citation was changed from "Amendment 2" to "Amendment 3"*

**Comment # 49 from USDOE, dated May 6, 2015**

"Fugitive Dust Control is covered under Section 9.8 (not 8.1) of the DE02NWP-002, Rev. 2 Permit Conditions."

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "9.8"*

**Comment # 50 from USDOE, dated May 6, 2015**

"“Marshaling Yard” is no longer a term used to describe the BNI material storage area. The current term is “Material Handling Facility” or “MHF”"

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The term "Marshaling Yard" has been changes to "Material Handling Facility"*

**Comment # 51 from USDOE, dated May 6, 2015**

"Opacity is covered under Section 2.1 (not 1.3) of the DE02NWP-002, Rev. 2 Permit Conditions."

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "2.1".*

**Comment # 52 from USDOE, dated May 6, 2015**

"Opacity is covered under Section 2.1 (not 1.3) of the DE02NWP-002, Rev. 2 Permit Conditions."

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "2.1".*

**Comment # 53 from USDOE, dated May 6, 2015**

"Opacity is covered under Section 2.1 (not 1.3) of the DE02NWP-002, Rev. 2 Permit Conditions."

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "2.1".*

**Comment # 54 from USDOE, dated May 6, 2015**

"ULSF is covered under Section 2.2 (not 1.4) of the DE02NWP-002, Rev. 2 Permit Conditions."

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "2.2".*

**Comment # 55 from USDOE, dated May 6, 2015**

“ULSF content is 0.0015% (15 ppm) or less as per the permit conditions in Section 2.2 of the DE02NWP-002, Rev. 2 Permit and Condition 2 of the PSD-02-01 Permit.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees and will change the maximum sulfur content from “0.0030%” to “0.0015%”*

**Comment # 56 from USDOE, dated May 6, 2015**

“Fuel consumption for the steam generating boilers is covered under Section 2.3 (not 1.5) of the DE02NWP-002, Rev. 2 Permit Conditions.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "2.3".*

**Comment # 57 from USDOE, dated May 6, 2015**

“NOC requirements are covered under Section 3.2 (not 2.2) of the DE02NWP-002, Rev. 2 Permit Conditions.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "3.2".*

**Comment # 58 from USDOE, dated May 6, 2015**

“Do not see Condition 2.3 covered under any sections of the DE02NWP-002, Rev. 2 Permit Conditions.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Please see Page 69 of the Air Operating Permit, line items 16-25.*

*No change to the Permit is required.*

**Comment # 59 from USDOE, dated May 6, 2015**

“Performance Demonstration Plan requirements are covered under Section 4.1 (not 3.1) of the DE02NWP-002, Rev. 2 Permit Conditions.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "4.1".*

**Comment # 60 from USDOE, dated May 6, 2015**

“Testing requirements are covered under Section 4.2 (not 3.2) of the DE02NWP-002, Rev. 2 Permit Conditions.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "4.2".*

**Comment # 61 from USDOE, dated May 6, 2015**

“Boiler startup requirements are covered under Section 4.5 (not 3.5) of the DE02NWP-002, Rev. 2 Permit Conditions.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "4.5".*

**Comment # 62 from USDOE, dated May 6, 2015**

“Boiler Carbon Monoxide Monitoring requirements are covered under Section 4.6 (not 3.6) of the DE02NWP-002, Rev. 2 Permit Conditions.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "4.6".*

**Comment # 63**

This comment was intentionally left blank.

**Comment # 64 from USDOE, dated May 6, 2015**

“Boiler Emission Control Monitoring requirements are covered under Section 5.0 (not 4.) of the DE02NWP-002, Rev. 2 Permit Conditions.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The section reference has been changed to "5.0".*

**Comment # 65 from USDOE, dated May 6, 2015**

“PSD Amendment 3, Approval Condition 2, states that the emergency generators be fired by ultra-low sulfur diesel fuel, with a maximum sulfur content of 0.0015 percent by weight (15 ppm), not 0.003% by wt.”

***Ecology Response:***

Ecology offers the following explanation.

Ecology agrees and will change the maximum sulfur content from “0.0030%” to “0.0015%”.

**Comment # 66 from USDOE, dated May 6, 2015**

“PSD Amendment 3, Approval Condition 2, states: “today’s project consists of eliminating the two Type II emergency diesel generators from the design and replaces them with two turbine generators”.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. Ecology did find the comment quote in PSD, Amendment 3, as Finding # 5 (in the Findings section) and not in the Approval Condition section.*

*Ecology will change the condition text from “Each Type I or Type II emergency generator shall not exceed 164 hours per year” to “Each Type I **emergency generator or turbine generator** shall not exceed 164 hours per year when averaged over 12 consecutive months, calculated once per month”*

**Comment # 67 from USDOE, dated May 6, 2015**

“Inaccurate condition.

Emergency turbine generators shall not exceed 69.8 pounds per hour (each), when averaged over 1-hour and 164 hours per year averaged over 12 consecutive months”, per PSD, Amendment 3, Condition 14.”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology agrees. The text will be changed from “Emissions of NO<sub>x</sub> from the Type II Generators shall not exceed 547.5 lb/day (each), when averaged over 24 consecutive hours.” to “Emissions of NO<sub>x</sub> from the **Turbine** Generators shall not exceed **69.8 lb/day (each), when averaged over 24 consecutive hours and 164 hours per year averaged over 12 consecutive months.**”*

**Comment # 68 from USDOE, dated May 6, 2015**

“PSD Amendment 3, Approval Condition 2, states that the emergency generators be fired by ultra-low sulfur diesel fuel, with a maximum sulfur content of 0.0015 percent by weight (15 ppm), not 0.003% by wt.”



**Ecology Response:**

*Ecology offers the following explanation.*

*Ecology agrees and will change the maximum sulfur content from “0.0030%” to “0.0015%”.*

**Comment # 69 from USDOE, dated May 6, 2015**

“Inaccurate condition.

Diesel Fire Water Pumps hours of operation shall not exceed 230 hours per year averaged over 12 consecutive months, per PSD, Amendment 3, Condition 15.”

**Ecology Response:**

*Ecology offers the following explanation.*

*Ecology agrees. The text will be changed from “Hours of operation for each pump  $\leq$  110 hours per year averaged over 12 consecutive months.” to “Hours of operation for each pump **shall not exceed 230** hours per year averaged over 12 consecutive months.’.*

**Comment # 70 from USDOE, dated May 6, 2015**

“Change the units in the condition for operational limits from “25 mmBtu/hr” to “25 MBtu/hr.”

Basis: Consistency with current permit condition.”

**Ecology Response:**

*Ecology offers the following explanation.*

*Ecology agrees and changed the condition units from “mmBtu/hr” to **MBtu/hr**”.*

**Comment # 71 from USDOE, dated May 6, 2015**

“This section states “This section contains emission unit specific requirements in addition to general standards for maximum emissions.” Please clearly describe how the general standards are to be applied to the specific discharge points, especially for compliance certification.”

**Ecology Response:**

*Ecology offers the following explanation.*

*The Statement of Basis for Attachment 1 sets forth the legal and factual basis for the AOP Attachment 1 conditions, and is not intended for enforcement purposes. The Statement includes references to the applicable statutory or regulatory provisions, technical supporting information on specific emission units, and clarifications of specific requirements. The Statement of Basis is non-enforceable, but is a supporting reference document that provides a rationale for the development of the permit and offers clarification where deemed necessary.*

*From the Hanford AOP, Attachment 1, Section 1.4, states “All emission units identified in this Section are subject to the general requirements listed in Table 1.1. **More stringent conditions** listed for specific discharge points in this Section **are used in lieu of** the general requirements” {emphasis added}. As discussed in Ecology responses 42 through 46, the general conditions apply*



*all of the time. It is not necessary or needed to describe how they are to be applied on a discharge point by discharge point basis.*

*Compliance certification is found in the Standard Terms and General Conditions part of the Hanford Site AOP, Section 5.10. Section 5.10.1 (a) through (e) is specific for “compliance certification will consist of the following:”*

*As the compliance certification is already present in the Hanford Site AOP Standard Terms and General Conditions and general requirements are the minimum emission baseline for all emissions, no change to the Attachment 1 Statement of Basis is required.*

**Comment # 72 from Beth Sanders, dated May 8, 2015**

“I am very concerned about the health and safety of Hanford workers and the public. Chemical vapor exposures are a serious problem at Hanford’s tank farms. Since March of 2014, 36 workers have received medical attention after being exposed to chemical vapors at Hanford.

Minimally what is need is better monitoring practices and an accurate inventory of tank farm emission. Otherwise, it is not possible to specify the regulatory and pollution control requirements that are applicable under the Clean Air Act.

All sources of air pollution from Hanford need to be accounted for in the AOP. Why do uranium and other regulated pollutants, for example, continue to leach into the Columbia River?”

***Ecology Response:***

*Ecology offers the following explanation.*

*Ecology is also concerned about the health and safety of Hanford Workers. However, the Clean Air Act (CAA) and its amendments regulate ambient air, which is defined in 40 CFR Part 50.1 (e) as “... that portion of the atmosphere, external to buildings, to which the general public has access.” The workers work on the Hanford site, which is land owned or controlled by the source and to which general public access is precluded by a fence or other physical barriers. As the Hanford site doesn’t qualify as ambient air, the CAA isn’t applicable; but on-site personnel are covered by other laws, rules, and regulations*

*Monitoring of Double Shell Tank (DST) emissions is performed and sample results analyzed to determine if the emissions are below the permit levels and to determine if any new toxic air pollutants (TAPs) were discovered during the sampling. The Permittee is in compliance with the permit as long as emissions are below permit requirements.*

*All ‘air’ emission sources regulated by the CAA are in the Hanford Air Operating Permit. The ‘leaching’ in the Columbia River is not covered by the CAA (Ecology assumes the use of the word “leach” by the commenter is implying the flow of contaminated groundwater into the Columbia River), but is covered by other programs.*

*No changes to the Permit are required.*

**Comment # 73 from Dale Thornton, dated May 11, 2015**

“The huge size of the Hanford site, the cleanup effort ongoing and the relatively low amount of emissions per acre, square mile, or other measurement factor as compared to a large city such as Seattle, the proposed AOP should be generous in consideration of the progress being made on removing the pollutants. Holding contractors responsible for possible vapor emissions from the dangerous tanks will only slow the progress of emptying those tanks and eliminating the source. The contractors are having enough trouble protecting the workers from the vapors while still trying to make progress on cleanup, they shouldn't need to divert their funding and attention toward accounting for vapors that they have no control over.

Please keep the AOP limited to similar levels and limit additional controls to those that are prudent. Adding more and more requirements, the diesel engine requirements and licensing for radiation emissions is simply layering more state government controls on top of existing regulations. This state does not need additional regulations, many regulations are bordering on authoritarian now.”

***Ecology Response:***

*Ecology is following the requirements of the Federal and Washington Clean Air Acts in regulating the Hanford Site. Ecology strives to uniformly apply these regulations, regardless of the Permittee's size, location, ownership (e.g. Government or Private), or activity being regulated.*

*Vapor emissions from the Hanford Tanks are regulated by the CAA when they enter ambient air in sufficient concentration to trigger regulation requirements. However, the Clean Air Act (CAA) and its amendments regulate ambient air. Ambient air is defined in 40 CFR Part 50.1 (e) as “... that portion of the atmosphere, external to buildings, to which the general public has access.” The workers work on the Hanford site, which is land owned or controlled by the source and to which general public access is precluded by a fence or other physical barriers. As the Hanford site doesn't qualify as ambient air, the CAA isn't applicable; but on-site personnel are covered by other laws, rules, and regulations.*

*No changes to the Permit are required.*

**Comment # 74 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 1, Section “**I. General Air Operating Permit (AOP) Structure**”, first ¶, first sentence.

“The AOP should be structured to provide maximum possible enforcement authority to agencies regulating Hanford's varied sources of air emissions, and to provide the strongest possible standards for protecting health, safety, and the environment.” “

***Ecology Response:***

*Ecology is following the requirements of the Federal and Washington Clean Air Acts in regulating the Hanford Site. Ecology strives to uniformly apply these regulations, regardless of the Permittee's size, location, ownership (e.g. Government or Private), or activity being regulated.*

*No change to the Permit is required.*

**Comment # 75 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 1, Section “**I. General Air Operating Permit (AOP) Structure**”, first ¶, second sentence.  
“It {the AOP} should also maximize opportunities for meaningful public involvement.””

***Ecology Response:***

*Ecology is following the requirements of the Federal and Washington Clean Air Acts in regulating the Hanford Site. Ecology strives to uniformly apply these regulations, regardless of the Permittee’s size, location, ownership (e.g. Government or Private), or activity being regulated.*

*Public involvement is covered in WAC 173-401-800 and Ecology follows this rule to ensure accurate permitting information is made available to the public in a timely manner.*

**Comment # 76 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 2, Section “**I. General Air Operating Permit (AOP) Structure**”, third ¶ of the section and first ¶ of the page, last sentence.

“This includes regulating the emission of radon gas, which is not addressed by this AOP despite the fact that radon is defined explicitly by section 112 of the CAA as a HAP, and the fact that the permittee has repeatedly acknowledged<sup>6</sup> that radon is being released in quantities sufficient to measurably increase the dose received by the (off-site) “maximally exposed individual.””<sup>7</sup>”

***Ecology Response:***

*Please see comment # 16.*

*Radon has not been overlooked. WAC 246-247-020 (4) and 40CFR61.91(a) (both referenced in the General Conditions of Attachment 2) allow the exclusion of naturally occurring radon and its respective decay products unless the concentrations or rates of emissions have been enhanced by industrial processes. This is the case at most of the Hanford site. However, where this is not the case, radon has been addressed. For example at the 325 building, which has a radon generator as part of its licensed process (see EU ID 361), radon emissions are tracked and reported.*

*Also see Exhibit F page 26 – 29*

*No change in the AOP is required.*

**Comment # 77 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 2, Section “**I. General Air Operating Permit (AOP) Structure**”, fourth ¶ of the section and second ¶ of the page, last sentence.

“While Ecology often passes public comments to the Department of Health for consideration, the public would be better served by review processes protected and required by law than by informal practices.””

***Ecology Response:***

*Please see responses to Comment # 7 and # 8.*

*The Department of Health follows the rules and regulation governing radiological air emissions. Ecology agrees the Nuclear Energy and Radiation Act (NERA) does not require or authorize public review or public hearings. However, the ability to change NERA rests with the Legislature and Governor of the State of Washington and not with the Department of Health.*

*No change in the AOP is required.*

**Comment # 78 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 2, Section “**I. General Air Operating Permit (AOP) Structure**”, fifth ¶ of the section and third ¶ of the page, second and third sentence.

“RCW 70.94.161 (2)(a),<sup>10</sup> for example, requires that all proposed permits are reviewed by a professional engineer (or their staff) employed by Ecology. Among other things, this assures the public that at least one “independent” technical expert reviews a proposed AOP before it is approved, but it is not required or authorized by NERA.””

***Ecology Response:***

*Please see response to comment # 9.*

*No change in the AOP is required.*

**Comment # 79 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 2, Section “**I. General Air Operating Permit (AOP) Structure**”, fifth ¶ of the section and third ¶ of the page, fourth sentence.

“NERA is also silent on prior review by the public, affected states, the EPA, and the Pollution Control Hearings Board, while WAC 173-401 requires it.””

**Ecology Response:**

*Please refer to Exhibit A, last paragraph of p. 5 -p. 6; Exhibit B, Issue No.2, pp.3-4; and Exhibit C., p.2. The Exhibits specifically address the applicability of public notice requirements to underlying requirements.*

*The FF-01 license from the Department of Health is completed and sent as a unit to the Department of Ecology for inclusion into the Hanford Air Operating Permit (AOP) as an applicable requirement. The mechanism to change the FF-01 license is not part of the AOP process under Washington Administrative Code 173-401. However, if a correction needs to be represented in the AOP, an addendum will be added to Attachment 2 of the AOP to correct any omissions or error contained in the FF-01 license with respect to Subpart H, as Ecology also has authority to enforce the NESHAP.*

*The AOP does have a public comment period, is sent to affected states, and the EPA. It can be appealed to the Pollution Control Hearings Board. As such the AOP is in compliance with applicable rules and regulations.*

*No change in the AOP is required*

**Comment # 80**

This comment was intentionally left blank.

**Comment # 81 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, fifth ¶ of the section and first ¶ of the page, fifth and sixth sentence.

“Hanford Challenge is also concerned about the omission of radon gas releases—defined as a HAP by section 112 of the CAA—in this AOP. The CAA’s Title V requires that permits address all HAPs, including radon and radionuclides.””

**Ecology Response:**

*Radon has not been overlooked. WAC 246-247-020 (4) and 40CFR61.91(a) (both referenced in the General Conditions of Attachment 2) allow the exclusion of naturally occurring radon and its respective decay products unless the concentrations or rates of emissions have been enhanced by industrial processes. This is the case at most of the Hanford site. However, where this is not the case, radon has been addressed. For example at the 325 building, which has a radon generator as part of its licensed process (see EU ID 361), radon emissions are tracked and reported.*

*Also see Exhibit F page 26 – 29.*

**Comment # 82 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, sixth ¶ of the section and second ¶ of the page.

“Finally, in Attachment 3 the Benton Clean Air Agency (BCAA), rather than Ecology, is empowered to enforce “National Emission Standards for Asbestos” (40 C.F.R. 61 subpart M). As previously noted, Ecology, as the sole permitting authority, is required by the CAA to have the authority and capacity to enforce all applicable requirements.””

***Ecology Response:***

*Please see response to Comments #5, #6, #7, and # 33 for background information.*

*No change is required in the AOP.*

**Comment # 83 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, seventh ¶ of the section and third ¶ of the page, bullet 1 of 4.

“Hanford Challenge recommends that the following actions be taken to revise the AOP:

- Regulate radionuclide emissions as a hazardous air pollutant under the CAA’s Title V and the Washington Clean Air Act”

***Ecology Response:***

*Radionuclides are regulated under RCW 70.98, RCW 70.94, and WAC 246-247. From the rules and regulations, the Department of Health creates the FF-01 license for the Hanford Site. This license is considered an applicable requirement for inclusion into the Hanford AOP. With the inclusion into the AOP, radionuclides are regulated under the CAA’s Title V program.*

*No changes needed.*

**Comment # 84 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, seventh ¶ of the section and third ¶ of the page, bullet 2 of 4.

“Hanford Challenge recommends that the following actions be taken to revise the AOP:

- Ensure that Ecology’s enforcement authority regarding radionuclides meets all legal requirements in the CAA”



**Ecology Response:**

*See the response to comment # 5.*

*The commenter is concerned the permitting authority (e.g. Ecology), does not have adequate authority to enforce the radionuclide requirements in a license issued by Health that are part of an air operating permit. This issue was previously raised in inquiries to the United States Environmental Protection Agency and the Washington State Department of Health. Those agencies responded to the inquiry in letters dated October 11, 2012 and July 16, 2010 which are attached as Exhibit A and B respectively.*

*Ecology has also adopted 40 CFR 61 and Appendices in Washington Administrative Code 173-400-075. This includes the Subpart H, for radionuclides other than radon from Department of Energy Facilities.*

*Please see Exhibit A at p. 1-4; Exhibit B at p. 3, Issue 1, Exhibit F at p. 12 - 13 Claim 1*

**Comment # 85 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, seventh ¶ of the section and third ¶ of the page, bullet 3 of 4.

“Hanford Challenge recommends that the following actions be taken to revise the AOP:

- Address the emission of radon within this AOP”

**Ecology Response:**

*Radon has not been overlooked. WAC 246-247-020 (4) and 40CFR61.91(a) (both referenced in the General Conditions of Attachment 2) allow the exclusion of naturally occurring radon and its respective decay products unless the concentrations or rates of emissions have been enhanced by industrial processes. This is the case at most of the Hanford site. However, where this is not the case, radon has been addressed. For example at the 325 building, which has a radon generator as part of its licensed process (see EU ID 361), radon emissions are tracked and reported.*

**Comment # 86 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, seventh ¶ of the section and third ¶ of the page, bullet 4 of 4.

“Hanford Challenge recommends that the following actions be taken to revise the AOP:

- Ensure Ecology, as the sole permitting authority, has the required authority to enforce all applicable standards, including those relating to radionuclides and asbestos”



***Ecology Response:***

*See response to Comment No. 84 for radionuclides. EPA has addressed this question more than once and concluded that Ecology has sufficient authority. Please see Exhibit A and Exhibit F page 12-13:*

*See response to Comment No. 33 for Asbestos.*

*No change to the permit is required.*

**Comment # 87 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, eighth ¶ of the section and fourth ¶ of the page, first sentence.

“...Hanford Challenge believes that the Statements of Basis should include the memorandum of understanding (MOU) between Ecology and the Department of Health that specifies the roles and responsibilities of each agency regarding radionuclide regulation at Hanford.<sup>11”</sup>”

***Ecology Response:***

*See response to comment No. 36.*

*No change in the Statement of Basis is needed.*

**Comment # 88 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, eighth ¶ of the section and fourth ¶ of the page, second sentence.

“The Statements of Basis should also address the legal and factual bases for using NERA, rather than the CAA, for regulating radioactive emissions.””

***Ecology Response:***

*Please see Exhibit A and Exhibit F.*

*The premise of the comment is inaccurate in that when Ecology incorporates the Health issued license as Attachment 2, the terms and conditions clearly indicate Ecology is adopting the terms and conditions of the NERA license as CAA requirements.*

*As the Terms and Conditions of the actual Title V Permit are based on the CAA and not NERA, no change to the Statement of Basis is required.*

**Comment # 89 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, ninth ¶ of the section, bullet 1 of 4.

“... Hanford Challenge recommends the following modifications to the AOP’s Standard Terms and General Conditions:

- (Section 4.6) <sup>12</sup> -- Clarify that federally enforceable requirements includes all requirements of the CAA, including those related to radionuclides. While radionuclides are regulated by the state under NERA, they do not thus cease to be federally regulated under the CAA [including 42 U.S.C. 7416 & 40 C.F.R. 70]. “”

***Ecology Response:***

*Unless the AOP states otherwise, all provisions in the AOP, are federally enforceable. Provisions that are not federal enforceable are specifically identified as “State only” (e.g. Section 4.12 has “{... RCW 70.94.221 (State only)}].*

*For radionuclides, Attachment 2 contains a section titled “DOE Federal Facilities 40CFR61 Subparts A, H, and WAC 246-247 Standard Conditions and Limitations” at the start of the Attachment. The conditions in this section apply to all of the individual licenses on an emission unit basis and indicate the Federal and State only requirements.*

*Additionally, each emission unit will call out additional citations (Federal or State), as required, that apply to that particular emission unit.*

*As citations in the AOP are already identified as federally enforceable or “State only”, no change in the permit is required.*

**Comment # 90 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3, Section “**I. General Air Operating Permit (AOP) Structure**”, ninth ¶ of the section, bullet 2 of 4.

“... Hanford Challenge recommends the following modifications to the AOP’s Standard Terms and General Conditions:

- (Section 4.12) -- Specify how the permittee and the public would be able appeal terms and conditions created or enforced by the Department of Health pursuant to NERA (RCW 70.98) in License FF-01. This is necessary because the Pollution Control Hearings Board does not have jurisdiction over licenses created under NERA, and the Department of Health does not have the authority to issue an AOP under RCW 70.94, the CAA, or 40 C.F.R. 70.””

***Ecology Response:***

*The appeal process for the AOP is presented in section 4.12 of the Standard Terms and General Conditions and Attachment 2 is part of the AOP.*

*The requirements of Health license issued under state law is appealable within the timeframe provided after the license is issued, but only the applicant or licensee can appeal under RCW 70.98.080, 70.98.130(3) and RCW 43.70.115. But, per the EPA Order (Exhibit F), bottom of page 24 – 25 and footnote 18, any conditions in the Health license that are used to address federal requirements are appealable to the PCHB at the time the AOP is issued/finalized.*

*No change in the AOP is required.*

**Comment # 91 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 3 and 4, Section “**I. General Air Operating Permit (AOP) Structure**”, ninth ¶ of the section, bullet 3 of 4.

“... Hanford Challenge recommends the following modifications to the AOP’s Standard Terms and General Conditions:

- (Section 5.19) – Clarify that all modifications allowed by sections 5.19 and 5.20 do not apply to License FF-01 (Attachment 2), which was created under regulations and statutes that do not recognize either “Off-permit Changes” or “Changes Not Requiring Permit Revisions”. ””

**Ecology Response:**

*The language of sections 5.19 and 5.20 will be changed to:*

*5.19.1 The source shall be allowed to make changes to Attachment 1 not specifically addressed or prohibited by the permit terms and conditions without requiring a permit ... ”*

*“5.20.1 Permittee is authorized to make the changes described in this section to Attachment 1 without a permit revision, providing the following conditions are met”*

**Comment # 92 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 4, Section “**I. General Air Operating Permit (AOP) Structure**”, ninth ¶ of the section, bullet 4 of 4.

“... Hanford Challenge recommends the following modifications to the AOP’s Standard Terms and General Conditions:

- (Section 5.19 & 5.20) – Clarify that new addresses provided by the EPA or Ecology are also acceptable.””

**Ecology Response:**

*Please see the response to comment # 21.*

*No change to the permit is needed.*

**Comment # 93 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 4, Section “**II. Addressing Tank Vapors**”, second ¶ of the section.

Efforts to identify and characterize toxic chemical vapors, as well as to stop these vapors from escaping and protect workers, have been inadequate. Workers in and near Hanford’s 177 aging high-level waste tanks have periodically reported serious illnesses and injuries connected with powerful odors for decades, but the tank farms are currently categorized as “insignificant emissions units” in the AOP. According to the Hanford Tank Vapor Assessment Report,<sup>14</sup> which was released in October 2014 by the Savannah River National Laboratory (SRNL), both the number of air pollutants and their concentration have been underreported. Without better monitoring practices and an accurate inventory of tank farm emissions, it is not possible to identify the regulatory and pollution control requirements that are applicable under the CAA. Yet, Ecology is obliged, under the CAA [40 C.F.R. 70.6 (a)(1)], to incorporate all applicable requirements, including those connected to all hazardous and toxic air pollutants (HAPSs and TAPs), into the AOP.”

**Ecology Response:**

*Ecology has incorporated all applicable requirements in to the Hanford AOP. This includes Notice of Construction permits for double shell tanks and single shell tanks in the Hanford Tank Farms.*

*The data presented in the Hanford Tank Vapor Assessment Report (TVAR) is not being questioned, but the applicability or relevancy of the data to the Federal Clean Air Act and the Washington Clean Air Act is not clear as the data is lacking important meta-data (e.g. where was the sample collected, how was the sample collected, what protocols were used for sample collection, etc.). Ecology doesn’t have access to the actual data presented in the TVAR and can only depend on the information as presented in the report. This raises a question on how relevant the data are for use in determining ambient air concentration data to be compared to acceptable source impact level (ASIL) values of Washington Administrative Code 173-460 in developing a Notice of Construction Permit. It is the Notice of Construction Permit that is the applicable requirement for inclusion in the AOP.*

*The objective of the Hanford Tank Vapor Assessment Team is stated on page 12 of 153 of the TVAR as “WRPS asked the Savannah River National Laboratory (SRNL) to assemble and lead the Hanford Tank Vapors Assessment Team (TVAT) 2014 to determine the adequacy of the established WRPS program and prevalent site practices to protect workers from adverse health effects of exposure to the chemical vapors on the Hanford tank farms.” [emphasis added] Ambient air is defined in 40 CFR Part 50.1 (e) as “... that portion of the atmosphere, external to buildings, to which the general public has access.” [emphasis added] In addition, WAC 173-460-070 requires*

*compliance with the state TAPs requirements to be demonstrated “in any area to which the applicant does not restrict or control access.” The Hanford site is land owned or controlled by the source and to which general public access is precluded by a fence or other physical barriers. The air at the Hanford Site doesn’t qualify as ambient air. Therefore, the State TAP requirements need not be met within the boundaries of the Hanford Site. However, on-site personnel are covered by other laws, rules, and regulations in regards to their safety.*

*As the underlying requirements from the Notice of Construction Permits were generated in accordance with the rules and regulations for the creation of the permits, no need exists to change the underlying conditions. With no need to change the underlying condition, no need exists to change the AOP.*

**Comment # 94 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 4, Section “**II. Addressing Tank Vapors**”, third ¶ of the section.

There may be some confusion about where such requirements and monitoring would apply, and who they are intended or required to protect. Ecology must ensure that the requirements of this AOP protect everyone, including those inside of the property line. Fortunately, in CAA Title V permits the emission limits, associated monitoring, reporting, and recordkeeping requirements apply at the individual emissions unit, rather than only at the source’s property boundaries,<sup>15</sup> and many of its protections apply to all “persons,”<sup>16</sup> rather than only the (offsite) “public.” Hanford employees do not stop being “persons” after arriving at work, and Ecology has the authority and responsibility under the CAA to protect them from dangerous emissions.

FN 16 The CAA does not define “person” with reference to the site boundary [42 U.S.C. 7602(e)], and recognizes as part of its definition of criminal activity placing a “person.” without reference to whether they are beyond the site boundary, in imminent danger. [42 U.S.C. 7413].”

**Ecology Response:**

*Please see response to comments #12, #13, #14, and #15.*

*The requirements for monitoring, reporting, and recordkeeping are specific to each emission unit and relate to the type of emission being monitored. Each emission unit has the appropriate monitor requirements in the issued permit for that unit. These requirements become part of the AOP monitoring, reporting, and record keeping requirements. As such, each emission unit is currently properly monitoring, reporting, and recordkeeping emission data. It is agreed that certain emission units have different points of compliance (e.g. opacity at the stack, HAPS and TAPS in ambient air, etc...), but these are addressed in the NOC permit and the AOP.*

*The commenter points out that the federal Clean Air Act defines “person” without reference to the site boundary, and makes it a criminal offense to place a “person” in imminent danger, without reference to the location of that “person” when harmed, citing 42 USC 4713 [CAA § 113]. The commenter neglects to note that the provision cited, 42 USC 7413(c)(4) makes it unlawful for any*

person to “negligently release into the **ambient air** any hazardous air pollutant...” [emphasis added]. Ambient air has been defined previously (see comment # 13) and ambient air is a location. Thus, the CAA protects people located in ambient air.

Ecology agrees with the commenter that permits must “... be adequate to determine whether any hazardous air pollutant or extremely hazardous air pollutant released into the environment could harm any “person”.” But this requirement is applicable to ambient air and the current monitoring, reporting, and recordkeeping meets this requirement.

No change in the permit is required.

**Comment # 95 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 6, Section “**II. Addressing Tank Vapors**”, ninth ¶ of the section, last two sentences.

“...WRPS does not attempt to protect workers from the synergistic effects of exposure to this dangerous mix of toxic vapors. Engineered controls at vapor release points or putting workers on supplied air are the obvious and recommended ways to effectively protect Tank Farm workers. However, currently there are no technologies deployed for capturing and treating the toxic vapors, nor is supplied air required in most cases at Hanford.””

**Ecology Response:**

*The Clean Air Act regulates ambient air. Ambient air is defined in 40 CFR Part 50.1 (e) as “... that portion of the atmosphere, external to buildings, to which the general public has access.” [emphasis added] In addition, WAC 173-460-070 requires compliance with the state TAPs requirements to be demonstrated “in any area to which the applicant does not restrict or control access.” The Hanford site is land owned or controlled by the source and to which general public access is precluded by a fence or other physical barriers. The air at the Hanford Site doesn’t qualify as ambient air. Therefore, the State TAP requirements need not be met within the boundaries of the Hanford Site. However, on-site personnel are covered by other laws, rules, and regulations in regards to their safety.*

No change to the AOP is required.

**Comment # 96 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 6 and 7, Section “**II. Addressing Tank Vapors**”, tenth ¶ of the section.

“Internal memoranda generated by Department of Ecology personnel in 2014 indicate that Hanford is not in compliance with Clean Air Act standards set for either mercury or NDMA. One memo,



dated September 27, 2014, indicates that the Acceptable Source Impact Levels (ASIL) had been exceeded for mercury by 111% of its ASIL and 1159% of the ASIL for NDMA.<sup>26</sup> Assuming that the model for the point of compliance was “the public”, which in Hanford’s case would be miles away from the tank farms (such as Route 243), exceedance of these standards is surprising. Even more worrisome, however, is the dose that humans closer to the emission sources must be encountering.”

**Ecology Response:**

*The internal memorandum discussed by the commenter was based on initial analytical results submitted by the Permittee. It was discovered the Permittee reported the wrong units associated with the results. The initial units were reported as milligram per cubic meter. The actual values were in micrograms per cubic meter. This reduces the percentage by 1000%, so the actual values reported are below the ASIL values.*

*No change to the AOP is required.*

**Comment # 97 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 10, Section “**II. Addressing Tank Vapors**”, twenty-seventh ¶ of the section.

Ecology and the EPA have the authority, under 40 C.F.R. 70.7 (f)(1)(iii)<sup>36</sup> & (iv),<sup>37</sup> to reopen the AOP, given the uncertainty regarding the variety and concentration of past and current tank vapor emissions. Hanford Challenge urges both agencies to exercise this authority, and make the strongest possible actions to protect human health and the environment from tank vapors mandatory under the AOP. Despite decades of recommendations by Hanford Challenge and others, as well as the devastating health effects they have had for many of those exposed, very little has been done by the U.S. Department of Energy and its contractors to address this issue. We therefore believe that action on tank vapors must be legally required and enforced aggressively. To the extent possible under the CAA, Ecology should incorporate the recommendations Hanford Tank Vapor Assessment Report into the AOP.”

**Ecology Response:**

*The Clean Air Act regulates ambient air. Ambient air is defined in 40 CFR Part 50.1 (e) as “... that portion of the atmosphere, external to buildings, to which the general public has access.” [emphasis added] In addition, WAC 173-460-070 requires compliance with the state TAPs requirements to be demonstrated “in any area to which the applicant does not restrict or control access.” The Hanford site is land owned or controlled by the source and to which general public access is precluded by a fence or other physical barriers. The air at the Hanford Site doesn’t qualify as ambient air. Therefore, the State TAP requirements need not be met within the boundaries of the Hanford Site. However, on-site personnel are covered by other laws, rules, and regulations in regards to their safety.*

*No change to the AOP is required.*



**Comment # 98 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 10, Section “**II. Addressing Tank Vapors**”, twenty-eighth ¶ of the section, bullet 1 of 6

Hanford Challenge urges Ecology to:

- Reopen the Hanford AOP.”

***Ecology Response:***

*No compelling reason exists or has been presented in comments to reopen the AOP*

**Comment # 99 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 10, Section “**II. Addressing Tank Vapors**”, twenty-eighth ¶ of the section, bullet 2 of 6

Hanford Challenge urges Ecology to:

- Provide a schedule of compliance regarding adequate monitoring of tank vapors and for the identification and control of unaccounted for HAPs and TAPs, including those associated with transient peaks. These schedules are required under 40 C.F.R. 70.6(c)(3) and WAC 173-401-630 (3). Six-month progress reports are also required under 40 C.F.R. 70.6 (c)(4) and WAC 173-401-630 (4)

***Ecology Response:***

*Please see response to comment # 12 and # 13.*

*The underlying Notice of Constructions for emissions incorporated into this AOP as applicable requirements considered the emissions for the discharge point covered by that NOC. The impact to ambient air was evaluated at that time using modeled impacts to the ambient air from the best available sample data and application of conservative assumptions. From this evaluation an Approval Order was issued to the Permittee to operate the emissions point.*

*A schedule of compliance is not required for state toxic air pollutants (TAPs) as these pollutants have not reached ambient air in concentrations requiring action or have already been assigned permit conditions in the underlying applicable requirement (e.g. NOC permit). WAC 173-460-150 is used with TAPs to determine when modeling is required. The process in WAC 173-460 has been followed for NOC issued permits that have become incorporated into this AOP as applicable requirements. As such, the individual permits have already established and addressed TAPs and the permittee is required to follow those requirements.*

*A schedule of compliance is not required for federal hazardous air pollutants (HAPs) as Hanford is already required to comply with all the applicable NESHAPs.*

*With the permittee following the requirements of the underlying NOC permits, they do not need to supply a schedule of compliance.*

*No change to the permit is needed.*

**Comment # 100 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 10, Section “**II. Addressing Tank Vapors**”, twenty-eighth ¶ of the section, bullet 3 of 6

Hanford Challenge urges Ecology to:

- Revise emission limits, monitoring, sampling, reporting, and recordkeeping requirements to reflect the findings and recommendations of the SRNL report.”

**Ecology Response:**

*See response to comment # 12.*

*The data presented in the Hanford Tank Vapor Assessment Report (TVAR) is not being questioned, but the applicability or relevancy of the data to the Federal Clean Air Act and the Washington Clean Air Act is not clear as the data is lacking important meta-data (e.g. where was the sample collected, how was the sample collected, what protocols were used for sample collection, etc.). Ecology doesn't have access to the actual data presented in the TVAR and can only depend on the information as presented in the report. This raises a question on how relevant the data are for use in determining ambient air concentration data to be compared to acceptable source impact level (ASIL) values of Washington Administrative Code 173-460 in developing a Notice of Construction Permit. It is the Notice of Construction Permit that is the applicable requirement for inclusion in the AOP.*

*The objective of the Hanford Tank Vapor Assessment Team is stated on page 12 of 153 of the TVAR as “WRPS asked the Savannah River National Laboratory (SRNL) to assemble and lead the Hanford Tank Vapors Assessment Team (TVAT) 2014 to determine the adequacy of the established WRPS program and prevalent site practices to protect workers from adverse health effects of exposure to the chemical vapors on the Hanford tank farms.” [emphasis added] Ambient air is defined in 40 CFR Part 50.1 (e) as “... that portion of the atmosphere, external to buildings, to which the general public has access.” [emphasis added] In addition, WAC 173-460-070 requires compliance with the state TAPs requirements to be demonstrated “in any area to which the applicant does not restrict or control access.” The Hanford site is land owned or controlled by the source and to which general public access is precluded by a fence or other physical barriers. The air at the Hanford Site doesn't qualify as ambient air. Therefore, the State TAP requirements need not be met within the boundaries of the Hanford Site. However, on-site personnel are covered by other laws, rules, and regulations in regards to their safety.*

*As the underlying requirements from the Notice of Construction Permits were generated in accordance with the rules and regulations for the creation of the permits, no need exists to change the underlying conditions. With no need to change the underlying condition, no need exists to change the AOP.*

**Comment # 101 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 10, Section “**II. Addressing Tank Vapors**”, twenty-eighth ¶ of the section, bullet 4 of 6

Hanford Challenge urges Ecology to:

- Provide a full and accurate inventory of regulated air pollutants, from both point sources and fugitive emissions that could be expected to be emitted by the tanks in a manner consistent with SRNL’s recommendations.”

***Ecology Response:***

*Please see response to comment # 100.*

**Comment # 102 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 10, Section “**II. Addressing Tank Vapors**”, twenty-eighth ¶ of the section, bullet 5 of 6

Hanford Challenge urges Ecology to:

- Re-evaluate the categorization of the tank farms as “insignificant emissions units.” Because tank vapors have not been adequately characterized, it is not possible to know what federal standard may be applicable. WAC 173-401-530 (2)(a) makes it clear that “no emissions unit or activity subject to a federally enforceable applicable requirement shall qualify as an insignificant emissions unit or activity.” Additionally, radionuclides are regulated without a de minimis under 40 C.F.R. 61 subpart H, which is a federally enforceable requirement. Therefore no emission unit subject to 40 C.F.R. 61 subpart H can be “insignificant,” including the tank farms, and should be included in Attachment 1 rather than Attachment 2, which is based on state law (NERA). Attachment 1, Section 1.2, pg. 11, lines 9-11<sup>38</sup> should therefore be deleted.”

***Ecology Response:***

*The Tank Farm emissions have not been categorically designated as insignificant emission units. Sections 1.4.25 and 1.4.26 are both permits for Tank Farm emissions units. Tank farm emissions have been and are evaluated against WAC 173-400, General Standards for Air Pollution Sources, to determine if they need to have a Notice of Construction Approval Order (permit) issued for their*

*emissions. For Tank Farm emissions requiring an NOC permit, a permit is issued following the regulations of WAC 173-400. Upon issuance, the permit becomes an applicable requirement and is added to the AOP.*

*No permit change is required.*

**Comment # 103 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 10, Section “**II. Addressing Tank Vapors**”, twenty-eighth ¶ of the section, bullet 6 of 6

Hanford Challenge urges Ecology to:

- Ensure that all of these requirements are subject to public review, as required by 40 C.F.R. 70.7 (h) and WAC 173-401-800.”

***Ecology Response:***

*Ecology is following the requirements of the Federal and Washington Clean Air Acts in regulating the Hanford Site. Ecology strives to uniformly apply these regulations, regardless of the Permittee’s size, location, ownership (e.g. Government or Private), or activity being regulated.*

*Public involvement is covered in WAC 173-401-800 and Ecology follows this rule to ensure accurate permitting information is made available to the public in a timely manner.*

**Comment # 104 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 110, Section “**III. Other Comments**”, bullet 1 of 6

- Attachment 1, Table 1.4 should include conditions from BCAA Administrative Order (AO) of Correction, No. 20030006, for control of fugitive dust from the Marshaling Yard.”

***Ecology Response:***

*Please see response to comment # 23.*

*The conditions of the AO are found in the terms of the underlying requirement in Approval Order DE02NWP-002, Amendment 4. DE02NWP-002, Amendment 4 states a dust control plan shall be “developed and implemented”. Additionally, the dust control plan “shall be made “available to Ecology upon request.”*

*No change in the AOP is required.*

**Comment # 105 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 110, Section “**III. Other Comments**”, bullet 2 of 6

- Include Dust Control Plan 24590-WTP-GPP-SENV-015, Revision 1 in the public review plan.”

***Ecology Response:***

*See response to comment # 24.*

*No change is required to the permit or Statement of Basis.*

**Comment # 106 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 110, Section “**III. Other Comments**”, bullet 3 of 6

- In License FF-01 (Attachment 2), the sum of allowable potentials-to-emit exceeds 10 mrem/year. Ecology should track and report the total potential radionuclide emissions allowed from individual emissions units specified in Attachment 2, Enclosure 1 (Emission Unit Specific License). It should also include potential radionuclide emissions from emissions unit regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).”

***Ecology Response:***

*Attachment 2 (FF-01 License) is created under the authority of WAC 246-247 and WAC 246-247 does not require the sum of all potentials-to-emit radionuclides. As no regulatory basis exists to require the summation, it will not be added as a permit condition.*

*Regulations promulgated under statutory authority other than the CAA (e.g., RCRA and CERCLA) are not Title V applicable requirements and are not included in the license. In addition, actions taken pursuant to CERCLA are exempt from permitting. However, the actions taken must meet the substantive requirements of applicable or relevant and appropriate requirements (ARARs) (e.g., WAC 246-247-040, ALARACT). Characterization and cleanup activities are being conducted at Hanford pursuant to CERCLA. The characterization and cleanup activities are applying best available radionuclide control technology to control emissions, and emissions are being monitored to ensure that the offsite dose to the maximally exposed individual is below the applicable standards. The CERCLA decision documents, such as an Action Memo, identify ARARs.*

*Hanford is required to report all radioactive air emissions (including those resulting from CERCLA actions) to demonstrate compliance with all dose standards (WAC-246-247 and 40CFR61).*

*Ecology offers the following explanation.*

**Comment # 107 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 110, Section “**III. Other Comments**”, bullet 4 of 6

- The Statement of Basis for Standard Terms and General Conditions, Renewal 2, Revision B contains an error (page iv, line 1). It states “Health regulates radioactive air emissions under the authority of RCW 70.92,” but RCW 70.92 does not authorize any air pollution regulations.

***Ecology Response:***

*Ecology agrees:*

*Line 1 on page iv of the Statement of Basis for Standard Terms and General Conditions will be changed from: “Health regulates radioactive air emissions under the authority of RCW 70.92 . . .” to “Health regulates radioactive air emissions under the authority of RCW 70.98 and 70.94....”*

**Comment # 108 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 110, Section “**III. Other Comments**”, bullet 5 of 6

- Provide the public with all of the information used in the permitting process, including the addition of six new emission units, the removal of nine emission units, and the replacement of twenty eight Notice of Construction orders of approval from the Draft Statement of Basis for Attachment 2, Table of Changes from FF-01 12-10-14 (pgs. 23-32). This is required under 40 C.F.R. 70.7 (h)(2). The EPA, in *Sierra Club v. Johnson*,<sup>39</sup> interpreted 40 C.F.R. 70.7 (h)(2) such that the use of any information in the permitting process makes it “relevant” to the permit decision, and should thus be available to the public. Public review should be restarted so that this information can be taken into account by commenters.”

***Ecology Response:***

*In Sierra Club v. Johnson, the court determined that all information used by the permitting authority to develop the **air operating permit** must be made available to the public for public*



*comment. The court did not require the permitting agency to make available to the public all information used to develop the underlying applicable requirements that are included in an air operating permit. Attachment 2 is created under the authority of WAC 246-247 and provided to Ecology as a whole. Ecology accepts the FF-01 license “as-is” and incorporates it into the air operating permit, in the same way Ecology incorporates the federal NESHAPs requirements into the air operating permit. Thus there is no requirement for Ecology to make available to the public all the information used by the Department of Health in developing the FF-01 license.*

*No requirement exists in WAC 246-247 for listing the changes in the FF-01 license. Even so, the Department of Health created a “Table of Changes” in the FF-01 License to provide a brief description of changes (starting on page 23 of Attachment 2) for the convenience of the reader even though it was not required to do so.*

*It is not necessary to restart the public comment and no change in the AOP is required.*

**Comment # 109 from Tom Carpenter, Hanford Challenge, dated May 8, 2015**

“The submitted comments are presented in a text format (as opposed to a listing format). Ecology has made a best faith effort to extract and list each comment from the text and present it as a specific and unique comment. The full text of the submitted comments is presented in **Exhibit E**.

Page 110, Section “**III. Other Comments**”, bullet 6 of 6

- Revisions to the AOP should also either include the Columbia River as a conduit for the emission of airborne radionuclides, or the legal and factual reasons for its exclusion should be presented to the public. Uranium from the soil and groundwater of Hanford’s 300 area is leeching into the Columbia River,<sup>40</sup> and uranium decays into (among other things) radon, which is a dangerous radioactive gas. As previously mentioned, the regulation of radon emissions has been improperly omitted from the AOP, and must be incorporated into the permit. This uranium and radon contamination is a result of previous Hanford operations, and so creates exposures beyond natural background radiation levels. It is therefore required under the CAA that it be regulated as an HAP in this AOP.”

**Ecology Response:**

*See response to comment # 38.*

*All registered and any unregistered sources of radioactive air emissions are monitored by DOE using ambient air samplers as described in Section 5 of Attachment 2 (FF-01). DOE reports the results of this monitoring program in the annual air emissions report. As a result of this monitoring, the Columbia River is not deemed a credible source of radionuclide air emissions. The Department of Health has submitted a request to DOE to determine if this concern is valid.*

*See response to comment #16.*

*Radon has not been overlooked. Both WAC 246-247-020 (4) and 40 CFR 61.91(a) allow the exclusion of naturally occurring radon and its respective decay products unless the concentrations*



*or rates of emissions have been enhanced by industrial processes. This is the case at most of the Hanford site. However, where this is not the case, radon has been addressed. For example at the 325 building, which has a radon generator as part of its licensed process (see EU ID 361), radon emissions are tracked and reported.*

*Also see Exhibit F page 26 - 29*

*No change in the AOP is required.*

**Comment # 110 from USDOE, dated July 28, 2012**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2. It is identified as Comment 50 in Exhibit H.

A number of additional revisions to the FF-01 license have been approved/issued by DOH since the 2/23/2012 version that was included in the AOP public comment draft issued. Prior to final issuance of the AOP renewal, an updated version of the FF-01 needs to be issued and incorporated into the AOP.

Recommendation: Verify all additional radioactive air emissions licensing activities issued/performed since DOH issued the renewed FF-01 on 2/23/2012 are identified and captured in an updated FF-01 for issuance with the final AOP.

***Ecology Response:***

*The additional revisions to the FF-01 license that were issued/approved by DOH since the 2/23/2012 version were incorporated and are part of this revision of the AOP.*

*No change to AOP Revision B is required.*

**Comment # 111 from USDOE, dated July 28, 2012**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2. It is identified as Comment 54 in Exhibit H.

EU141 has been closed and should be removed from the FF-01. A report of closure for EU141 (DOE letter 12-ECD-0014) was transmitted to DOH on 6/6/2012.

Recommendation: Revise the FF-01 License to remove EU141 and update the Health SOB to add it to the list of obsolete emission units.

***Ecology Response:***

*This EU141 has been removed from the FF-01 license and ATT 2.*

*No change to AOP Revision B is required.*

**Comment # 112 from USDOE, dated July 28, 2012**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2. It is identified as Comment 63 in Exhibit H.

EU1180 has been closed and no longer exists. It should be removed from the FF-01, along with its approval letter AIR 11-302 and NOC ID 787.

Recommendation: Revise the FF-01 License to remove EU1180 and update the Health SOB to add it to the list of obsolete emission units.

***Ecology Response:***

*EU1180 has been removed from the FF-01 license and ATT 2.*

*No change to AOP Revision B is required.*

**Comment # 113 from Bill Green, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 36 in Exhibit G.

**Make the following changes to the first (1st) sentence on the signature page of AOP Attachment 2, License FF-01.**

The first (1st) sentence on the signature page of Permit *Attachment 2* reads:

“Under the Nuclear Energy and Radiation Control , RCW 70.98 the Washington Clean Air Act, RCW 70.94 and the Radioactive Protection- Air Emissions, Chapters 246-247 WAC, and in reliance on statements and representations made by the Licensee designated below before the effective date of this license, the Licensee is authorized to vent radionuclides from the various emission units identified in this license.”

Make the following changes to this sentence:

1. Replace the word “Control” with “Act” so it reads “Nuclear Energy and Radiation Act”. The *Nuclear Energy and Radiation Act* is the correct title of RCW 70.98.
2. Remove the “s” from the end of the word ‘Chapters’ to reflect that WAC 246-247 is only one (1) chapter in the Washington Administrative Code (WAC).
3. Remove “the Washington Clean Air Act, RCW 70.94”. While the Washington Clean Air Act (WCAA) does provide Health with the ability to enforce a License issued pursuant to RCW 70.98 in accordance with several paragraphs of the WCAA<sup>2</sup>, the WCAA does not provide Health with the authority to issue a License authorizing “the Licensee [ ] to vent radionuclides from the various emission units identified in this license”. Only the *Nuclear Energy and Radiation Act* (NERA), RCW 70.98 provides Health with the authority to issue Licenses. Furthermore, Health does not have rulemaking authority under the WCAA.

Quoting from *Attachment 2*, Section 3.10, *Enforcement actions*:

In accordance with RCW 70.94.422, the department may take any of the following actions to **enforce compliance** with the provisions of this chapter:

- (a) Notice of violation and compliance order (RCW 70.94.332).
  - (b) Restraining order or temporary or permanent injunction (RCW 70.94.425; also RCW 70.98.140).
  - (c) Penalty: Fine and/or imprisonment (RCW 70.94.430).
  - (d) Civil penalty: Up to ten thousand dollars for each day of continued noncompliance (RCW 70.94.431 (1) through (7)).
  - (e) Assurance of discontinuance (RCW 70.94.435).
- (emphasis added) *Attachment 2*, Section 3.10

Thus, in Section 3.10 of *Attachment 2 Health* correctly acknowledges its authority under the WCAA is confined to various enforcement actions.

<sup>1</sup> See <http://apps.leg.wa.gov/RCW/default.aspx?cite=70.98&full=true>

<sup>2</sup> “The department of health shall have all the enforcement powers as provided in RCW 70.94.332, 70.94.425, 70.94.430, 70.94.431 (1) through (7), and 70.94.435 with respect to emissions of radionuclides.” RCW 70.94.422 (1)

***Ecology Response:***

*The first two changes recommended in the comment are administrative in nature and do not impact the enforceability or functionality of the permit. The comment has been provided to the Washington Department of Health for their consideration.*

*The third comment was about removing “the Washington Clean Air Act, RCW 70.94” from the sentence. The purpose of WAC 173-480 is to “... define maximum allowable levels for radionuclides in the ambient air and control emissions from specific sources.” The Statutory Authority for this is RCW 70.94.331. Further, WAC 173-480-050 states “all emission units shall meet chapter 246-247 or 246-248 WAC...” The Statutory Authority is given as RCW 70.94.331 and 70.94.422.*

*Thus emission limits are established under the authority of RCW 70.94.331 and it is these limits the licenses are based upon. The listing of RCW 70.94 in the paragraph is accurate and doesn’t need to be removed.*

*No change to AOP Revision B is required.*

**Comment # 114 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 48 in Exhibit G.

The pre filter is missing from the list of abatement technology and the description section requires clarification.

Recommendation: Modify the Abatement Technology Additional Description to read as follows:

Pre Filter: 2 2 in parallel flow paths  
HEPA: 2 2 in parallel flow paths with 2 in series  
Fan: 1 1 fan abandoned in place

***Ecology Response:***

*The required abatement control devices are listed for the emission unit. If USDOE would like to add additional requirements (e.g. pre-filters) to the license, then they should start a Notice of Construction Modification with the Department of Health to add additional requirements to their license for this emission unit.*

*No change to AOP Revision B is required.*

**Comment # 115 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 49 in Exhibit G.

The damper does not perform an abatement function, and is the reason it is not included in any of the other stack's abatement technology descriptions (with the exception of 296-A-43 with the same comment for removal).

Recommendation: Remove the Radial Damper from the Abatement Technology table for 296-A-20.

***Ecology Response:***

*The damper is a required State-Only required abatement control device as it is used to limit the permitted flow rate to no greater than 1000 scfm.*

*No change to AOP Revision B is required.*

**Comment # 116 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 50 in Exhibit G.

The damper does not perform an abatement function, and is the reason it is not included in any of the other stack's abatement technology descriptions (with the exception of 296-A-43 with the same comment for removal).

Recommendation: Remove the Radial Damper from the Abatement Technology table for 296-A-43.

***Ecology Response:***

*The damper is a required State-Only required abatement control device as it is used to limit the permitted flow rate to no greater than 1000 scfm.*

*No change to AOP Revision B is required.*

**Comment # 117 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 51 in Exhibit G.

Corrections are needed to the Abatement Technology Additional Description Section. 296-A-18 ventilation system contains only 1 abatement train. The heater is non-operational. This stack exhaust system is identical to the 296-A-19 (EU218) system.

Recommendation: Abatement Technology, Additional Description:  
Remove "2 parallel flow paths" from the HEPA, Fan, and Heater descriptions.

**Ecology Response:**

*The current application for this emission unit indicates that it has 2 parallel flow paths and the requirement for a heater. If the emission unit only has one flow path, then submit a Notice of Construction modification to the Department of Health to have the license modified.*

*The heater is a State-Only requirement for the emission unit. If it is non-functional, then the emission is not operating compliantly. The heater either needs to be made functional or USDOE needs to submit a notice of Construction modification to the Department of Health to have the license modified.*

*No change to AOP Revision B is required.*

**Comment # 118 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 52 in Exhibit G.

Additional Requirements section states: “Radial breather filters shall be replaced every 365 days.” This filter is an open face filter and this requirement is not applicable.

Recommendation: Replace the additional requirement with the following:  
“Breather filters shall be aerosol tested every 365 days.”

**Ecology Response:**

*The current license State-Only conditions and requirements under WAC 246-247-040(5) allow the Department of Health to set” set requirements and limitations on the operation of the emission unit(s) as specified in a license”. The specification for replacement of the filter every 365 is within the authority of the Department of Health.*

*If USDOE wants to change the requirement, a Notification of Construction modification will need to be submitted to the Department of Health.*

*No change to AOP Revision B is required.*

**Comment # 119 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 53 in Exhibit G.

Additional Requirements section states: “Radial breather filters shall be replaced every 365 days.” This filter is an open face filter and this requirement is not applicable.

Recommendation: Replace the additional requirement with the following:  
“Breather filters shall be aerosol tested every 365 days.”

**Ecology Response:**

*See the response to comment # 118.*

**Comment # 120 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 54 in Exhibit G.

Several radionuclides are listed in the “Radionuclides Requiring Measurement” Table that are not listed in the application. The applicable NOC application transmittal (04-ED-028, Attachment 1, Table 9 and Table 10) identify Cs-137, Sr-90, and Am-241 as isotopes contributing greater than 10% of the potential effective dose equivalent. WAC 246-247-035(1)(ii) and 40CFR61.93(4)(i) state: “All radionuclides which could contribute greater than 10% of the potential effective dose equivalent for a release point shall be measured.”

Recommendation: Remove the following isotopes from the “Radionuclides Requiring Measurement” Table: Y-90, Cs-134, Pa-231, Pu- 238, Pu-239, Pu-240, Pu-241.

***Ecology Response:***

*The current State-Only license conditions and requirements under WAC 246-247-040(5) allow the Department of Health to set” limits on emission rates for specific radionuclides from specific emission units”. The specification for the radioisotopes are allows under WAC 246-247-040(5)*

*No change to AOP Revision B is required.*

**Comment # 121 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 55 in Exhibit G.

Several radionuclides are listed in the “Radionuclides Requiring Measurement” Table that are not listed in the application. The applicable NOC application transmittal (04-ED-028, Attachment 1, Table 9 and Table 10) identify Cs-137, Sr-90, and Am-241 as isotopes contributing greater than 10% of the potential effective dose equivalent. WAC 246-247-035(1)(ii) and 40CFR61.93(4)(i) state: “All radionuclides which could contribute greater than 10% of the potential effective dose equivalent for a release point shall be measured.”

Recommendation: Remove the following isotopes from the “Radionuclides Requiring Measurement” Table: Y-90, Cs-134, Pa-231, Pu- 238, Pu-239, Pu-240, Pu-241.

***Ecology Response:***

*The current State-Only license conditions and requirements under WAC 246-247-040(5) allow the Department of Health to set” limits on emission rates for specific radionuclides from specific emission units”. The specification for the radioisotopes are allows under WAC 246-247-040(5)*

*No change to AOP Revision B is required.*

**Comment # 122 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 56 in Exhibit G.

Several radionuclides are listed in the “Radionuclides Requiring Measurement” Table that are not listed in the application. The applicable NOC application transmittal (04-ED-028, Attachment 1, Table 9 and Table 10) identify Cs-137, Sr-90, and Am-241 as isotopes contributing greater than 10% of the potential effective dose equivalent. WAC 246-247-035(1)(ii) and 40CFR61.93(4)(i) state: “All radionuclides which could contribute greater than 10% of the potential effective dose equivalent for a release point shall be measured.”

Recommendation: Remove the following isotopes from the “Radionuclides Requiring Measurement” Table: Y-90, Cs-134, Pa-231, Pu- 238, Pu-239, Pu-240, Pu-241.

***Ecology Response:***

*The current State-Only license conditions and requirements under WAC 246-247-040(5) allow the Department of Health to set” limits on emission rates for specific radionuclides from specific emission units”. The specification for the radioisotopes are allows under WAC 246-247-040(5)*

*No change to AOP Revision B is required.*

**Comment # 123 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 57 in Exhibit G.

Several radionuclides are listed in the “Radionuclides Requiring Measurement” Table that are not listed in the application. The applicable NOC application transmittal (04-ED-028, Attachment 1, Table 9 and Table 10) identify Cs-137, Sr-90, and Am-241 as isotopes contributing greater than 10% of the potential effective dose equivalent. WAC 246-247-035(1)(ii) and 40CFR61.93(4)(i) state: “All radionuclides which could contribute greater than 10% of the potential effective dose equivalent for a release point shall be measured.”

Recommendation: Remove the following isotopes from the “Radionuclides Requiring Measurement” Table: Y-90, Cs-134, Pa-231, Pu- 238, Pu-239, Pu-240, Pu-241.

***Ecology Response:***

*The current State-Only license conditions and requirements under WAC 246-247-040(5) allow the Department of Health to set” limits on emission rates for specific radionuclides from specific emission units”. The specification for the radioisotopes are allows under WAC 246-247-040(5)*

*No change to AOP Revision B is required.*

**Comment # 124 from USDOE, dated December 19, 2013**

This comment was submitted as part of the public comment period for the Hanford AOP Renewal 2, Revision A. It is identified as Comment 58 in Exhibit G.

AIR 13-607, 6-20-13, approved the demolition and removal of the old 296-A-21 K-1 exhauster (EU486); closed the 296-A-21 stack (EU 141); and inadvertently obsoleted the new 296-A-21A K-1 Exhauster upgrade stack.



Tanks Farms currently operates two stacks at the 242A Evaporator: 1) 296-A-21A Evaporator building vent (242A-003, EU1294), and 2) 296-A-22 Evaporator vessel vent (242A-002, EU142)

Recommendation: Re-instate EU 1294, P-242A-003 (296-A-21A) back into the FF-01 license.

***Ecology Response:***

*The addition has occurred.*

*No change to AOP Revision B is required.*

**APPENDIX A: COPIES OF ALL PUBLIC NOTICES**

Public notices for this comment period:

1. Statement of Basis
2. Public notice (focus sheet)
3. Classified advertisement in the *Tri-City Herald*
4. Notice sent to the Hanford-Info email list
5. Event posted on Ecology Hanford Education & Outreach Facebook page

## APPENDIX B: COPIES OF ALL WRITTEN COMMENTS

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## **APPENDIX C: TRANSCRIPTS FROM PUBLIC HEARINGS**

## REFERENCES